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Wages and hours of labor in the dyeing and finishing of textiles, 1930. Bulletin No. 537.

Proceedings of seventeenth and eighteenth annual meetings of International Association of Public Employment Services. Seventeenth held at Philadelphia, September 24-27, 1929; eighteenth held at Toronto, Canada, September 9-12, 1930. Bulletin No. 538.

Unemployment-benefit plans in the United States and unemployment insurance in foreign countries. Bulletin No. 544.

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Wages and hours of labor in cotton goods manufacturing, 1910 to 1930. Bulletin No. 539.

Wholesale prices, 1930. Bulletin No. 543.

UNITED STATES DEPARTMENT OF LABOR

W. N. DOAK, Secretary

BUREAU OF LABOR STATISTICS

ETHELBERT STEWART, Commissioner

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This Issue in Brief

The 5-day week as a permanent labor policy has been making considerable progress during the past few years. Reports received from 37,587 establishments in 77 different industries in answer to a questionnaire sent out by the Bureau of Labor Statistics show that 2.4 per cent of such establishments had permanently adopted the 5-day week for part or all of their employees and that 5.6 per cent of all of the employees covered in the survey were on a 5-day-week basis. The automobile industry had the highest percentage (44.3) of workers on the 5-day week, followed by the radio industry (34.4), the dyeing and finishing textiles industry (27.0), and the aircraft industry (24.9). Page 1.

Cold weather presents no insurmountable physical obstacles to winter building, even in sections of the country where rigorous weather normally prevails in the winter. The opinions of leading men in the construction industry, who were interviewed by an agent of the Bureau of Labor Statistics in a recent investigation of the causes of seasonal fluctuations in that industry in the cities of Chicago, Milwaukee, Fond du Lac, Eau Claire, Minneapolis, St. Paul, Atlanta, and New Orleans, show that these fluctuations are due not so much to weather conditions as to old popular notions and customs which have been in existence for years past. An article on page 6 summarizes the information obtained in the survey and presents the views of leading firms of architects, large building contractors, small home builders, and owners of buildings on the question of winter operations in the construction industry.

A decision refusing permission for a reduction in wage rates was rendered by the Colorado Industrial Commission on August 4, 1931, in the case of a coal-mining company which had served notice of its intention to reduce the wages of its employees. The findings and award of the commission are given on page 112.

The group life insurance policies held by employees of the General Electric Co. who have been laid off temporarily for lack of work were reestablished on July 1, 1931, through an arrangement by officials of the company with the Metropolitan Life Insurance Co. Certificates which have been canceled because of the provisions limiting the period during which they will remain in force following temporary lay-off on account of lack of work may be reestablished for a period of four months by the payment of the current monthly premiums. It was expected that at the expiration of the four months if no improvement in employment conditions has occurred the period will be further extended. Page 57.

An unemployment-benefit plan for pocketbook workers in New York City was provided by joint agreement, on June 13, 1931, for members of the International Pocketbook Workers' Union. The cost of the system is to be borne equally by employers and union members, the employers to contribute 2½ per cent of the weekly pay roll of all union members in their shops and the workers 2½ per cent of their weekly earnings. Page 42.

New Hampshire, by an act of 1931, became the seventeenth State to enact an old-age pension law. The law provides for a system of assistance to aged and dependent persons of the State; to be extended by the counties, with reimbursement by the city or town legally chargeable for the assistance rendered. The enactment of the law in New Hampshire increases to five the number of States enacting such laws during the 1931 legislative year. Other States adopting such legislation this year include Delaware, Idaho, New Jersey, and West Virginia. Page 59.

Average hourly earnings in the motor-vehicle industry decreased 2.6 cents from 1928 to 1930, according to the latest biennial survey of wages and hours of labor in that industry made by the Bureau of Labor Statistics. Earnings in 1930 averaged 72.4 cents per hour as compared with 75 cents in 1928, 72.3 cents in 1925, and 65.7 cents in 1922. Average full-time earnings per week were \$35.33 in 1930, which was \$1.72 per week less than in 1928, \$1.04 less than in 1925, and \$2.41 more than in 1922. Full-time hours per week averaged 48.8 in 1930, 49.4 in 1928, 50.3 in 1925, and 50.1 in 1922. Page 148.

Union scales of wages and hours of labor for 20 trade groups in selected cities are given in an article on page 156, presenting an abridged compilation of the data obtained by the Bureau of Labor Statistics as of May 15, 1931, in its annual survey of union scales. Wide fluctuations in wage rates as between cities are shown in most of the occupations listed; for example, hourly rates for bricklayers ranged from \$1 in Charleston, S. C., and New Orleans to \$1.94 in Newark, N. J., and for daywork compositors on newspapers, from 88.9 cents in Manchester, N. H., to \$1.44 in New York. Of 679 instances in which comparative wage rates are given for 1930 and 1931, 99 represented increases over 1930, 39 decreases, and 541 no change. The comparative data on full-time hours show 7 increases, and 97 decreases, the remaining 568 quotations out of the total of 672 comparisons showing no change.

A test of a new dust eliminator to be used in rock drilling was carried out in New York City recently. The new machine removes the dust of 60 drills at one time and represents the first attempt to reduce, by suction, the rock-dust hazard in excavation. Silicosis is an increasingly important hazard in New York City owing to the large amount of excavation which is being carried out at all times, and the disease is prevalent among a certain class of workers. Miss Frances Perkins, State Industrial Commissioner, states that no other place, except perhaps the diamond mines of South Africa, has so great a silicosis hazard. Page 74.

Reductions in both frequency and severity of accidents in building construction in New York City in 1930 as compared with 1928 are shown in statistics compiled by the Building Trades Employers' Association of New York City from reports of members, although data for New York State as a whole show increases. In 25 different trades, 141 member firms, with 2,802 employees working 5,673,274 man-hours, completed the year 1930 without a lost-time accident. Page 71.

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Extent of 5-Day Week in American Industry, 1931

THE 5-day week as a permanent labor policy in industry has been making considerable progress in the past few years. The reduction of working hours has been a matter of evolution, the history of labor in the United States showing that there has been a constant shortening of the working-day. A century ago a man's work was from sun up to sun down—11, 12, and 13 hours a day. These were the hours of the building trades and of shop and factory workers. During the years, hours have been reduced gradually to 10, to 9, to 8, and in some instances to 7, this movement being led mainly by the organized building trades. Outside of the workers in the building trades few employees in industry were on an 8-hour-workday basis prior to the beginning of the World War. During 1915 and 1916 certain workers engaged in the manufacture of war munitions demanded the establishment of an 8-hour basic day. After the entrance of the United States into the war the various governmental agencies gave considerable impetus to the movement for a shorter working-day by establishing an 8-hour day for all Government work connected with the building of camps and cantonments and work in shipyards.

The next move for the reduction of working hours was for a shorter working-day on Saturday. Between 1915 and 1919 the Saturday half day of work became quite general in the organized building trades and in business offices, and was not unknown in manufacturing establishments.

In more recent years there has come the desire for a full holiday on Saturday—the 5-day week. The annual union-wage surveys made by the Bureau of Labor Statistics show an increasing extension of the 5-day week in the building trades. In 1930, 55.5 per cent of the building-trades workers in the localities covered by the survey had a 5-day week. According to information available to the bureau, in June, 1931, a 5-day work week was in existence in 190 cities and towns for one or more of the crafts in the building work, and in 44 cities and towns *all* crafts of the building trades were working on a 40-hour basic week.

In order that comprehensive statistics might be available as to the extent to which the 5-day week has gained a fixed place in manufacturing and other industries, questionnaires were recently sent out by the Bureau of Labor Statistics to a large number of establishments. Reports were received from 37,587 establishments in 77 different industries. The establishments questioned were those that regularly cooperate with the bureau in making monthly employment reports. Such employment reports show that the establishments replying to the questionnaire as to the 5-day week had 3,941,792 employees.

The survey shows that 2.4 per cent of the establishments that made a report had permanently adopted the 5-day week for all or a part of their employees. It further shows that 5.6 per cent of all the employees covered in the survey were on a permanent 5-day-week basis. In some plants where the short week was in effect in part, employees in certain departments were still working more than 5 days per week because it was not practicable to put all departments on a 5-day-week basis.

Plants operating 5 days or less *temporarily* because of the present depression were not included in the 5-day week group; only industrial concerns that have adopted as a permanent policy the short work week were so classified.

It is evident from information accompanying the replies to the questionnaires, that there is a growing sentiment in favor of the 5-day week in industry, and that a considerable number of those plants that now work 5 days or less per week temporarily will, when the depression has passed, readjust their working schedule on a 5-day basis.

In a study of the figures here presented it must be kept in mind that this is a presentation of samples. It was impossible to circularize all establishments operating in the United States, but the number responding to the questionnaire (37,587) is so large that it probably represents a fair cross-section of industry as a whole. The spirit of cooperation of the bureau's correspondents is evidenced by the fact that 85 per cent of the establishments solicited responded to the inquiry.

In Table 1 the establishments have been segregated, by industry, into three groups, showing the number of concerns working on a 5-day-week basis, those working over 5 days, and those with part of their employees working 5 days and part of their employees working longer than 5 days. The table also shows the number of employees working 5 days per week and those working over 5 days. This segregation of employees was possible because the establishments having a 5-day week in part reported the per cent of their employees in each class.

The automobile industry is in the lead so far as the percentage of workers on the 5-day week is concerned, 44.3 per cent of the employees in the establishments reporting being on a 5-day-week basis. The radio industry, with 34.4 per cent, the dyeing and finishing textiles industry, with 27.0 per cent, and the aircraft industry, with 24.9 per cent, follow the automobile industry in the extent of the 5-day week for their employees.

TABLE 1.—NUMBER AND PER CENT OF ESTABLISHMENTS AND OF EMPLOYEES REPORTED AS ON A 5-DAY-WEEK BASIS IN 1931, BY INDUSTRY

Industry	Number of establishments						Number of employees			
	5-day week	Over-5-day week	Part 5, and part over 5 day week	Total	Per cent of total having 5-day week	Per cent of total having part 5, and part over 5 day week	5-day week	Over-5-day week	Total	Per cent of total having 5-day week
<i>Manufacturing</i>										
Agricultural implements.....		86		86			12,092	12,092		
Aircraft.....	6	27	1	34	17.6	3.0	2,376	7,180	9,556	24.9
Automobiles.....	22	163		185	11.9		91,066	114,376	205,442	44.3
Auto tires and tubes.....	4	31	1	36	11.1	2.8	2,593	42,382	44,975	5.8
Baking.....	5	648	1	654	.8	.2	2,717	57,403	60,120	4.5
Beet sugar.....		58		58				2,718		
Beverages.....		235	5	240		2.1	187	11,705	11,892	1.6
Brass, bronze, and copper products.....	7	146	2	155	4.5	1.3	178	23,414	23,592	.8
Brick, tile, and terra cotta.....	8	591	6	605	1.3	1.0	745	28,631	29,376	2.5
Car building and repairing:										
Electric railroad.....		397		397				23,276	23,276	
Steam railroad.....	3	529		532	.6		312	86,320	86,632	.4
Carpets and rugs.....	4	23	3	30	13.3	10.0	1,167	17,514	18,681	6.2
Carriages and wagons.....	3	44		47	6.4		17	795	812	2.1
Cash registers, adding and calculating machines.....	1	41	1	43	2.3	2.3	585	15,166	15,751	3.7
Cast-iron pipe.....	1	36		37	2.7		85	6,446	6,531	1.3
Cement.....		112		112				20,980	20,980	
Chemicals.....	6	130	2	138	4.3	1.4	1,230	22,999	24,229	5.1
Chewing and smoking tobacco and snuff.....	3	19	4	26	11.5	15.4	1,897	6,262	8,159	23.3
Cigars and cigarettes.....	19	156		175	10.9		2,674	42,542	45,216	5.9
Clothing, men's.....	31	276	5	312	9.9	1.6	8,165	45,289	53,454	15.3
Clothing, women's.....	83	196	12	291	28.5	4.1	4,032	20,794	24,826	16.2
Confectionery.....	18	301	1	320	5.6	.3	1,930	28,338	30,268	6.4
Cotton goods.....	36	358	7	401	9.0	1.7	10,346	142,441	152,787	6.8
Dyeing and finishing textiles.....	21	67	7	95	22.1	7.4	7,029	19,047	26,076	27.0
Electrical machinery, apparatus, and supplies.....	17	174	3	194	8.8	1.5	9,286	114,518	123,804	7.5
Fertilizers.....	2	194	3	199	1.0	1.5	72	6,280	6,352	1.1
Flour.....	1	380		381	.3		58	14,906	14,964	.4
Foundry and machine-shop products.....	51	986	19	1,056	4.8	1.8	17,663	166,345	184,008	9.6
Furniture.....	18	392	4	414	4.3	1.0	1,528	43,372	44,900	3.4
Glass.....	3	132	1	136	2.2	.7	551	33,004	33,555	1.6
Hardware.....	1	61	1	63	1.6	1.6	64	17,003	17,067	.4
Hosiery and knit goods.....	17	298	8	323	5.3	2.5	3,914	79,852	83,766	4.7
Ice cream.....		304	2	306		.7	15	12,952	12,967	.1
Iron and steel.....	3	176	1	180	1.7	.6	274	195,369	195,643	.1
Jewelry.....	11	129		140	7.9		835	13,029	13,864	6.0
Leather, boots and shoes.....	8	256		264	3.0		988	94,997	95,985	1.0
Leather goods other than boots and shoes.....	1	118	1	120	.8	.8	53	23,094	23,147	.2
Lumber, millwork.....	13	306	6	325	4.0	1.8	1,138	23,001	24,139	4.7
Lumber, sawmills.....	6	602	3	611	1.0	.5	1,720	83,385	85,105	2.0
Machine tools.....	7	136		143	4.9		296	20,698	20,994	1.4
Mechanical rubber goods, other than boots, shoes, auto tires, and tubes.....	11	62	1	74	14.9	1.4	2,714	8,554	11,268	24.1
Millinery and lace goods.....	3	97		100	3.0		183	11,543	11,726	1.6
Paint and varnish.....	9	215	4	228	3.9	1.8	376	12,991	13,367	2.8
Paper boxes.....	19	238	3	260	7.3	1.2	1,750	19,291	21,041	8.3
Paper and pulp.....	3	183	3	189	1.6	1.6	1,833	49,938	51,771	3.5
Petroleum refining.....		67		67				55,411	55,411	
Pianos and organs.....	3	58		61	4.9		87	4,092	4,179	2.1
Pottery.....	6	95	1	102	5.9	1.0	319	15,327	15,646	2.0
Printing, book and job.....	21	505	14	540	3.9	2.6	4,451	44,000	48,451	9.2
Printing, newspapers.....		411	12	423		2.8	3,185	71,791	74,976	4.2
Radio.....	3	27		30	10.0		5,544	10,585	16,129	34.4
Rayon.....		17		17				22,500	22,500	
Rubber boots and shoes.....		10		10				12,720	12,720	
Shipbuilding.....		79		79				2,008	2,008	

TABLE 1.—NUMBER AND PER CENT OF ESTABLISHMENTS AND OF EMPLOYEES REPORTED AS ON A 5-DAY-WEEK BASIS IN 1931, BY INDUSTRY—Continued

Industry	Number of establishments						Number of employees			
	5-day week	Over-5-day week	Part 5, and part over 5 day week	Total	Per cent of total having 5-day week	Per cent of total having part 5, and part over 5 day week	5-day week	Over-5-day week	Total	Per cent of total having 5-day week
<i>Manufacturing—Contd.</i>										
Shirts and collars.....	8	87		95	8.4		557	13,054	13,611	4.1
Silk goods.....	18	210	10	238	7.6	4.2	4,023	41,202	45,225	8.9
Slaughtering and meat packing.....	1	186	9	196	.5	4.6	1,642	61,434	63,076	2.6
Stamped and enameled ware.....	3	70		73	4.1		419	14,418	14,837	2.8
Steam fittings and steam and hot-water heating apparatus.....	6	101	2	109	5.5	1.8	1,820	22,691	24,511	7.4
Stoves.....	7	112	10	129	5.4	7.8	984	15,327	16,311	6.0
Structural-iron work.....	6	152	6	164	3.7	3.7	319	19,390	19,709	1.6
Sugar refining, cane.....		13		13				8,225	8,225	
Typewriters and supplies.....		3		3				1,139	1,139	
Woolen and worsted goods.....	30	133	7	170	17.6	4.1	7,815	44,594	52,409	14.9
<i>Miscellaneous</i>										
Anthracite mining.....		77		77				43,976	43,976	
Bituminous coal mining.....	11	1,314	1	1,326	.8	.1	1,099	232,392	233,491	.5
Canning and preserving.....	5	817	3	825	.6	.4	772	40,554	41,326	1.9
Crude petroleum producing.....	5	525	1	531	.9	.2	178	19,903	20,081	.9
Dyeing and cleaning.....		128		128				5,060	5,060	
Electric railroad operation and maintenance, exclusive of car shops.....		507		507				142,846	142,846	
Laundries.....	31	268	14	313	9.9	4.5	1,487	24,702	26,189	5.7
Metalliferous mining.....	1	296	1	298	.3	.3	628	34,279	34,907	1.8
Power, light, and water.....		3,678	4	3,682		.1	160	232,484	232,644	.1
Quarrying and nonmetallic mining.....	15	750	4	769	2.0	.5	1,242	28,438	29,680	4.2
Retail trade.....	3	7,111	10	7,124	(1)	.1	123	249,845	249,968	(1)
Telephone and telegraph.....		6,999		6,999				283,972	283,972	
Wholesale trade.....	5	1,765	4	1,774	.3	.2	91	59,614	59,705	.2
Total.....	673	36,680	234	37,587	1.8	.6	221,587	3,720,205	3,941,792	5.6

¹ Less than one-tenth of 1 per cent.

Table 2 includes only those establishments that reported having a 5-day week for a part of their employees but not for all.

There were 234 establishments so reporting, having a total of 54,124 employees, of which 41.1 per cent were on a 5-day week. The number of establishments in any one industry is so small that comparison between industries is hardly warranted.

TABLE 2.—NUMBER OF ESTABLISHMENTS AND NUMBER AND PER CENT OF EMPLOYEES REPORTED AS ON PART 5 AND PART OVER 5 DAY WEEK BASIS, 1931, BY INDUSTRY

Industry	Number of establishments	Number of employees			
		5-day week	Over 5-day week	Total	Per cent of total having 5-day week
Manufacturing					
Aircraft.....	1	42	147	189	22.2
Auto tires and tubes.....	1	288	144	432	66.7
Baking.....	1	2,100	2,101	4,201	50.0
Beverages.....	5	187	377	564	33.2
Brass, bronze, and copper products.....	2	51	52	103	49.5
Brick, tile, and terra cotta.....	6	311	560	871	35.7
Carpets and rugs.....	3	160	237	397	40.3
Cash registers, adding and calculating machines.....	1	6	7	13	46.2
Chemicals.....	2	90	636	726	12.4
Chewing and smoking tobacco and snuff.....	4	293	99	392	74.7
Clothing, men's.....	5	599	504	1,103	54.3
Clothing, women's.....	12	412	480	892	46.2
Confectionery.....	1	4	5	9	44.4
Cotton goods.....	7	586	2,434	3,020	19.4
Dyeing and finishing textiles.....	7	1,813	1,932	3,745	48.4
Electrical machinery, apparatus, and supplies.....	3	279	1,211	1,490	18.7
Fertilizers.....	3	53	21	74	71.6
Foundry and machine-shop products.....	19	2,472	1,536	4,008	61.7
Furniture.....	4	176	302	478	36.8
Glass.....	1	77	387	464	16.6
Hardware.....	1	44	175	219	20.1
Hosiery and knit goods.....	8	548	1,763	2,311	23.7
Ice cream.....	2	15	783	798	1.9
Iron and steel.....	1	5	46	51	9.8
Leather goods other than boots and shoes.....	1	8	26	34	23.5
Lumber, millwork.....	6	307	214	521	58.9
Lumber, sawmills.....	3	184	268	452	40.7
Mechanical rubber goods other than boots, shoes, auto tires and tubes.....	1	37	12	49	75.5
Paint and varnish.....	4	199	331	530	37.5
Paper boxes.....	3	337	258	595	56.6
Paper and pulp.....	3	1,070	351	1,421	75.3
Pottery.....	1	61	112	173	35.3
Printing, book and job.....	14	1,155	2,415	3,570	32.4
Printing, newspaper.....	12	3,185	2,317	5,502	57.9
Silk goods.....	10	852	1,367	2,219	38.4
Slaughtering and meat packing.....	9	1,618	2,549	4,167	38.8
Steam fittings, and steam and hot-water heating apparatus.....	2	84	19	103	81.6
Stoves.....	10	335	806	1,141	29.4
Structural-iron work.....	6	48	474	522	9.2
Woolen and worsted goods.....	7	348	3,120	3,468	10.0
Miscellaneous					
Bituminous coal mining.....	1	28	27	55	50.9
Canning and preserving.....	3	59	18	77	76.6
Crude petroleum producing.....	1	120	30	150	80.0
Laundries.....	14	604	329	933	64.7
Metalliferous mining.....	1	546	182	728	75.0
Power, light, and water.....	4	160	108	268	59.7
Quarrying and nonmetallic mining.....	4	224	209	433	51.7
Retail trade.....	10	66	343	409	16.1
Wholesale trade.....	4	22	32	54	40.7
Total.....	234	22,268	31,856	54,124	41.1

Table 3 includes only those establishments that have all their employees on a permanent 5-day-week basis. The establishments so reporting number 673, with 199,319 employees.

TABLE 3.—ESTABLISHMENTS IN WHICH ALL EMPLOYEES WERE ON 5-DAY-WEEK BASIS, 1931, BY INDUSTRY

Industry	Number of establishments	Number of employees	Industry	Number of establishments	Number of employees
<i>Manufacturing</i>			<i>Manufacturing—Continued</i>		
Aircraft.....	6	2,334	Lumber, millwork.....	13	831
Automobiles.....	22	91,066	Lumber, sawmills.....	6	1,536
Auto tires and inner tubes.....	4	2,305	Machine tools.....	7	296
Baking.....	5	617	Mechanical rubber goods other than boots, shoes, auto tires and tubes.....	11	2,677
Brass, bronze, and copper products.....	7	127	Millinery and lace goods.....	3	183
Brick, tile, and terra cotta.....	8	434	Paint and varnish.....	9	177
Car building and repairing, steam railroad.....	3	312	Paper boxes.....	19	1,413
Carpets and rugs.....	4	1,007	Paper and pulp.....	3	763
Carriages and wagons.....	3	17	Pianos and organs.....	3	87
Cash registers, adding and calculating machines.....	1	579	Pottery.....	6	258
Cast-iron pipe.....	1	85	Printing, book and job.....	21	3,296
Chemicals.....	6	1,140	Radio.....	3	5,544
Chewing and smoking tobacco and snuff.....	3	1,604	Shirts and collars.....	8	557
Cigars and cigarettes.....	19	2,674	Silk goods.....	18	3,171
Clothing, men's.....	31	7,566	Slaughtering and meat packing.....	1	24
Clothing, women's.....	83	3,620	Stamped and enameled ware.....	3	419
Confectionery.....	18	1,926	Steam fittings and steam and hot-water heating apparatus.....	6	1,736
Cotton goods.....	36	9,760	Stoves.....	7	649
Dyeing and finishing textiles.....	21	5,216	Structural-iron work.....	6	271
Electrical machinery, apparatus, and supplies.....	17	9,007	Woolen and worsted goods.....	30	7,467
Fertilizers.....	2	19	<i>Miscellaneous</i>		
Flour.....	1	58	Bituminous coal mining.....	11	1,071
Foundry and machine-shop products.....	51	15,191	Canning and preserving.....	5	713
Furniture.....	18	1,352	Crude petroleum producing.....	5	58
Glass.....	3	474	Laundries.....	31	883
Hardware.....	1	20	Metalliferous mining.....	1	82
Hosiery and knit goods.....	17	3,366	Quarrying and nonmetallic mining.....	15	1,018
Iron and steel.....	3	269	Retail trade.....	3	57
Jewelry.....	11	835	Wholesale trade.....	5	69
Leather, boots and shoes.....	8	988			
Leather goods other than boots and shoes.....	1	45	Total.....	673	199,319

Causes of Seasonal Fluctuations in the Construction Industry

ALTHOUGH the existence of seasonal fluctuations in the construction industry has been recognized for some years past, no effective study has been made to determine and segregate the causes of these fluctuations. Are they due to the cold weather which prevails during the winter months or are there other elements, such as the rental and moving dates and other local customs, which may be responsible for the stoppage of construction work during the winter? To what extent is the stoppage due to physical factors which make it impossible to carry on construction work in cold weather or to psychological factors due to the generally prevailing notion that winter is not the proper season for building operations? What can be done in either case in order to eliminate or at least to mitigate the seasonal fluctuations in the construction industry?

In the search for an answer to these questions, the United States Bureau of Labor Statistics recently dispatched a special agent to interview leaders of the construction industry in the following cities: Chicago, Ill.; Milwaukee, Fond du Lac, and Eau Claire, Wis.; Minne-

apolis and St. Paul, Minn.; Atlanta, Ga.; and New Orleans, La. The persons interviewed were requested to express their opinions in the form of personal letters to the bureau, and the report of the agent and the opinions of the architects, builders, and real estate men interviewed are presented in this article. Not only have these persons given their opinions as to the practicability of winter building, but they have in many cases given detailed accounts of the protective and other measures necessitated by work in winter weather which should be helpful to others in the same field of work.

Summary

Winter operations in the construction industry in the Northern States.—The rigorous winter weather which normally prevails in the States of Illinois, Wisconsin, and Minnesota is no longer a serious problem to the construction industry in these States. Twenty years ago the advent of the first frost in November would bring with it a complete cessation of activities in all lines of construction work. Not only would no new building projects be started during the months of November to March, inclusive, but even jobs already begun in late summer or early fall but not yet completely inclosed before the arrival of winter would be shut down until the coming of spring.

The situation now presents an entirely new aspect. During the war and immediately afterward many builders were compelled to carry on a large proportion of their work during the winter months in order to complete their projects within the time limits set by their contracts. They soon discovered that the cold weather, in itself, presented no physical obstacles which could not be overcome by means of more diligent supervision and a certain amount of protection of the work against snow and ice. Additional experimentation soon convinced them that even the operations which are most adversely affected by freezing temperatures, namely, the pouring of concrete and the masonry work on the exterior or the shell of the building, can easily be safeguarded by the simple device of heating the water and the aggregates in the process of mixing the concrete and by protecting the newly concreted section of the structure by means of canvas inclosures and artificial heat supplied by coke or oil-burning salamanders.

The trend in favor of winter work in the construction industry received a further stimulus from the report of President Harding's Committee on Unemployment which, under the leadership of President Hoover, then the Secretary of Commerce, made a special study on seasonal fluctuations in the construction industry. The report was published in 1924. The committee found that winter construction work had been carried on with considerable success in all parts of the country, and that the workmanship and the cost of winter operation did not compare unfavorably with any other season of the year. In prefacing the report President Hoover therefore declared: "The seasonal character of the construction industries is a matter of custom and habit, not of climatic conditions." The findings of the committee were taken up by the various trades and associations connected with the construction industry, and a strong movement grew up with the purpose of further extending winter operations in order to mitigate the seasonal fluctuations in the construction industry.

In the present survey in Illinois, Minnesota, and Wisconsin an attempt was made to ascertain (1) the extent of building operations carried on by the firm, number of years' experience in the business, and the territory covered; (2) the type of building specialized in (industrial plants, commercial buildings, apartment houses, bungalows, etc.); (3) the extent of winter operations carried on; (4) the principal difficulties and disadvantages to builder and to owner in carrying on winter operations; (5) the methods of pouring concrete, laying brick, etc., used by the firm to overcome the difficulties offered by winter weather and to guarantee the soundness and safety of the building erected during the winter; (6) the extra costs involved in carrying on construction during the winter; (7) the comparative efficiency of labor in winter and summer building; (8) the principal advantages of winter building to builder and to owner; (9) whether the firm, on the basis of its experience in winter operations, advocates or disapproves of operations during the winter months and reasons therefor; (10) any helpful information on the problem of winter operations, particularly as to the possible effect on the stabilization of the construction industry.

Some of the outstanding facts disclosed by the opinions of the representative organizations and individuals in this section of the country are as follows:

(1) Winter weather is not regarded as a deterrent to building operations in the case of the major types of buildings, such as large offices, industrial plants, large apartment buildings, etc., which require a year or more for completion.

(2) On major operations, architects and general contractors carry on construction work irrespective of the season of the year and even in subzero weather. The majority of the contractors in this section of the country have had several years of experience with winter work and know the precautions necessary for winter operations.

(3) The precautions and the equipment needed for winter work are comparatively simple and have now become fairly standardized.

(4) The extra expenses involved in protecting winter work against the weather are comparatively small and represent but a small fraction of the total building cost. The exact amounts vary considerably with the nature of the project and the severity of the winter season. Some of the architects and contractors are of the opinion that this extra cost is in some measure overcome by the lower costs on other items; they point out that the price of materials is lower in the winter; that the contractor may voluntarily reduce his profit on a winter job in order to keep his organization intact and his men employed, while the workmen will often accept a lower rate for year-round work. Some are even of the opinion that the extra measures necessary to protect the job in winter are no greater or more expensive than those necessary, because of heat and rain, to protect it in the summer.

(5) There is no definite agreement among the builders as to the comparative efficiency of labor in winter work. Very few contractors contend that they get as much work from a given workman during the cold season as at milder seasons of the year, as the worker is hampered by cold and by the extra clothing which he must wear. The majority of the contractors, however, are of the opinion that the average efficiency of the men hired during the winter months is

higher than the summer average. This is due to the fact that, since work is slack during the winter months, the employer has a large supply of labor from which to choose. Only the best workmen, therefore, are retained.

(6) In the construction of smaller buildings, and particularly of the smaller houses, the season of the year is still an important factor. The opinion of architects and builders in this field is more or less divided. Some favor winter operations in all buildings, while others are opposed to winter work on houses as uneconomical and more or less hazardous. Those in favor of winter work on this class of building believe that the person who has his house built in the off season has a decided advantage because of lower costs of materials, lower charges by the contractor, a higher grade of labor, etc. They state, also, that a house built in the winter under the proper precautions is as well constructed as one built in the summer. Others, on the contrary, are of the opinion that winter costs are enough higher to make a prospective home builder hesitate to undertake the construction of his new house in the winter.

(7) The architects and the contractors no longer need to be educated as to the practicability of winter construction work. The amount of winter operations in the construction industry, however, will be determined by the extent toward which the general public, and particularly the prospective builders, are educated to the safety, feasibility, and desirability of building in the off season.

Fluctuations in the construction industry in the Southern States.—In view of the fact that cold weather no longer plays an important rôle in the construction industry, even in the sections of the country which are affected by a prolonged and moderately severe winter season, the question arose as to the other factors which are directly or indirectly responsible for the continuation of seasonal fluctuations in the building trades. The survey of the Bureau of Labor Statistics was therefore extended to include the construction industry in Atlanta, Ga., which is known to have a comparatively mild and short-winter season, and in New Orleans, La., where freezing weather is rare.

The monthly figures of building permits issued, as published by the Bureau of Labor Statistics, show the volume of construction in these two cities to be considerably smaller during the months of December, January, and February than at any other season of the year. This trend is not uniform, however, and it is not yet clearly established as to the extent to which the figures of contracts awarded in any one month actually measure the building operations carried on during that month. It was decided, therefore, not to accept the cessation of building operations during the winter months as an established fact, but to ascertain in the interviews with the representative architects and builders in these two cities (1) whether the locality really is affected by a recurrent winter stoppage in the construction industry, and (2) if so, the principal causes of the cessation of operations in the construction industry during the winter months.

The outstanding facts disclosed by the survey in Atlanta and New Orleans are:

(1) The attitude of the representative architects and builders in the city of Atlanta toward the question of winter building is not uniform. They agree that there is a decided diminution in building

operations during the months of December, January, and February of each year. They also agree that one of the principal causes for the winter slump in building activities is the fact that the city of Atlanta has only one renting or leasing date, which falls on September 1. All prospective commercial and home builders plan their operations so as to have the building completed by that date. This condition throws the bulk of building operations on the spring and summer months, for very few, even of the larger residences, require more than eight months for building.

A large number of the builders, however, also insist that the cessation of building activities during the winter months is also due to a very large degree to the weather conditions in Atlanta during those months. They state that while the spells of cold weather in Atlanta are very brief and not particularly severe, there is more rain in the months of January and February than in other months of the year. The frequent rains, alternating with an occasional cold and freezing temperature at this time of the year, make it almost impossible to proceed with any outside work. Besides, very few of the builders in Atlanta have had experience in building during the cold season, and they are not provided with the equipment necessary for winter operations.

There are some among the architects and builders who claim that the causes of the winter slack period in Atlanta are entirely psychological, due to a general tendency of the public to begin thinking about building a home only with the arrival of warm weather. It is their view that an additional one or even two renting dates during the year and an educational campaign in favor of the year-round building operations, would lessen the seasonal fluctuations in the building trades in Atlanta. The builders would then be called upon to perform a certain proportion of their work during the winter season and would thus be given an opportunity to show whether or not it is physically impossible to build in Atlanta during the winter season.

(2) In contrast with the situation in Atlanta, the representative architects and builders in New Orleans are fairly unanimous in their views on winter building. It is generally admitted that New Orleans suffers from a definite falling off of building operations during the winter months, but it is also generally agreed that the winter weather has absolutely nothing to do with this condition. Some architects and builders even claim that conditions in the winter are more conducive to efficient workmanship in the construction industry than the hot summer weather. Nevertheless, the bulk of the construction work is concentrated during the late spring and summer months. This concentration is due to the single leasing date in New Orleans, which is October 1. Not only are all the new projects planned so as to be completed by that date, but nearly all of the repair work is done during the summer months in anticipation of the renting season. A movement was started several years ago to inaugurate an additional leasing date in the spring, but so far without any results. It is the unanimous opinion of the architects, general contractors, and subcontractors in the city of New Orleans that the fluctuations in the construction industry in that city will not be done away with until the single leasing date has been replaced by two or even three annual renting dates.

What can be done to stabilize the construction industry.—Construction work is very important in the industrial life of a community and a successful attempt to eliminate, or at least to mitigate, the seasonal fluctuations in the construction industry will of necessity prove beneficial not only to the construction industry but also to the country as a whole. The opinions of leading men in the construction industry who were interviewed show that the seasonal fluctuations in the industry are due not so much to weather conditions as to old popular notions and customs which have been in existence in the separate communities for years past, and which now prove to be the stumbling-block in the way of a more regulated development of the industrial life of the community.

Certain elements in the construction industry will always remain seasonal in the colder regions of the country. It is impossible to build roads and to pave streets during the cold winter months. But it has been shown that it is not impossible to build offices and houses during the winter months. An educational campaign such as was carried on in the city of St. Paul during the winter months of 1925-26 (see p. 26) may help to induce the prospective office and house owner to build when he is ready and not to wait until everybody else begins building.

Again, such cities as Atlanta, Ga., and New Orleans, La., in which the existence of a single leasing date in the fall is responsible for the concentration of the construction work during the summer months, could and should establish two and, if necessary, three leasing dates in order to spread the building activities over the entire year. It is the prospective owner of the building who needs to be educated, and an educational campaign started simultaneously in a number of cities may help considerably to straighten out the seasonal ups and downs in the construction industry, and to that extent also mitigate the social evils caused by these fluctuations.

Winter Building in Northern States

BELOW are given the views of leading firms of architects, large building contractors, small home builders, and owners of buildings on the question of winter operations in the construction industry. Because of the similarity of opinions of the individual firms, the complete statements of only one or two firms in each group are given, whose views come closest to representing the opinion of the entire group, the views of the other persons interviewed being presented only in summary form.

Chicago, Ill.

Opinions of Architects

THE views of the firm of Mundie & Jensen as to winter building in Chicago are as follows:

Uninterrupted work in the building trades in Chicago has been rapidly increasing with fruitful results. The accumulated experience of architects and builders, who have been operating regardless of winter weather, has proven the desirability of such practice. This applies mainly, however, to the larger operations and generally not at all to small residential work.

In cases where earned income of the completed building is an element, uninterrupted work is essential and the advantages gained more than offset the added cost.

The added cost of precautionary measures for safe and sound winter building operations will not exceed a maximum of 2 per cent of the cost of the operation, and in very many cases the cost is quite negligible.

The advantages are many. Among them are the elimination, or at least the reduction, of the slack labor periods; the assurance of maintaining completion schedules; the economic advantage of earlier earned income from the building.

Our own practice is to ignore the winter season as a deterrent in any important building operations, as our experience has shown it to be safe, economical, practical and in every way advisable to carry on with building operations regardless of low temperatures.

The views of the firm of Graham, Anderson, Probst & White are shown below:

Our practice is confined to large projects such as office buildings, banks, union stations, museums, etc. We seldom have occasion to advise a client as to summer or winter work for the reason that most of our projects continue for more than a year, and sometimes two, three, and four years.

The beginning and termination of a contract is largely controlled by the renting season. In Chicago the expiration of leases usually takes place on May 1. We therefore as a rule take possession of the site immediately after May 1 so that the wrecking and foundation can usually be completed in time to have the erection of the steel finished and the outside shell of the building completed before the appearance of extreme winter weather. After this condition has been reached in the building the weather has no effect on the operations inside the building.

In St. Paul and Minneapolis and also Winnipeg, Canada, where the winters are much more severe than they are in Chicago, we have no difficulty in working right through the winter. It is possible, of course, that a day or two may be lost, but the modern practice of heating materials and inclosing the working areas with tarpaulins permits reasonable economical work regardless of weather conditions. The expense of such protection and heat is not excessive and is more than offset by the reduction in fixed charges. * * *

We do not build residences or apartment houses, but we do feel that in buildings of this type winter work does not produce as good results as summer work. There is not the careful supervision and protection given this type of work, and the workmen are inclined to be a little more careless during the very cold weather.

Of the other firms of architects interviewed, that of Holabird & Root found winter construction "absolutely feasible without hardships to the contractor." Its representative asserts that the firm can build the tallest buildings within 12 months' time and lose very few days on account of inclement weather, and he also states that he can find no perceptible difference in the efficiency of construction labor between the winter and summer months.

The cost to the owner on building construction is no greater during the winter than during the summer, in the opinion of Alfred S. Alschuler, as the increased cost of winter production is more than offset by the reduction of the construction prices due to the contractor's keenness to get sufficient work to carry him over the slack season. Checking up the estimates of contractors during a period of years, his organization found that the cost of winter protection for reinforced concrete buildings varies approximately from 5 to 10 cents per square foot of slab area, which is about from 1½ to 4 per cent of the total cost of the building operations.

Opinions of Building Contractors

The views of the A. W. Lynch Co. are as shown below:

The theory that winter construction in the building industry must necessarily involve slow progress and prohibitive cost is being fast dissipated. The facts are that winter construction is not only practicable but desirable, since it meets

the owner's requirements of work, of good quality executed expeditiously and economically. It reduces the high pressure of summer months and gives relief to the lack of work during the winter months, with direct benefit to owner, builder, and laborer, and with consequent advantages to finance, manufacture, and transportation.

It has become almost trite to argue the case, but constant reiteration of the facts to the general public is necessary for full conviction on its part and to develop fully the effective results thus far accomplished. I am therefore briefly enumerating the elements which in my opinion justify winter construction.

Quality can be dismissed without discussion, for there is nothing else needed than competence to produce a quality of work in winter equal to that obtained in summer.

As to progress, there are few days in the year when it is too severely cold to work. Through accustomed habit of thought people generally consider the winter weather delay to be very considerable, but investigation of numerous jobs indicates that in recent years in this climate delay due to severe cold and heavy snows has not amounted to a total of a week's time. In rare cases it may amount to no more than 10 days. In thinking of weather delays in the winter, equal delays due to rain in the milder seasons are overlooked, and it is my opinion that there is little difference, if any, in amount of lost time between the winter and any other season. * * *

It will be conceded generally that the quality of work will be unimpaired and that work can proceed expeditiously in winter as well as in any other season, but it is argued that the cost is prohibitive; first, because the protection of the work in cold weather is very expensive; and second, because the execution of the work itself is too costly.

The methods of heating materials and of preventing freezing of concrete while being poured and afterwards are well known and need not be discussed. Many people, including some contractors and architects, lay considerable stress upon the increased cost which these precautionary measures add to the items of concrete and masonry work and fail to consider how small a ratio these extra outlays are in comparison with the total costs of the entire structure. When the structure is entirely reinforced concrete, the heat and protection costs are the greatest. Recent inquiries on the subject indicate this cost to run from 1½ to 4 per cent of the total building costs of jobs averaging from \$50,000 to \$250,000, the percentage decreasing as the size and value of the job increase. On a number of large reinforced-concrete structures running from \$1,000,000 to \$3,000,000 the writer has found the cost to run less than 1 per cent and only in one case as high as 3 per cent. On steel-frame buildings with concrete arches the ratio is considerably less, and on steel-frame buildings with tile arches it is still less.

Due to May 1 leasing in this territory, the demand for completion prior to May 1 of large buildings which generally require a year's construction period necessitates temporary heat for the interior work. The cost of temporary heat for this work, including heat for construction materials, rarely exceeds one-half of 1 per cent of the cost of the structure.

The writer made a case survey of the unit costs of concrete work, form work, and brickwork on five large jobs which clearly showed that the average unit costs of winter operations are as favorable if not more favorable than summer work.

As to the advantages of winter building to the owner and to the community at large, let us consider hypothetically the conditions of the construction industry in a city where all building contracts would be required by law to be concluded on a single specific date. All the arrangements for financing the building would occur in one short period; the architects would all be getting out plans and specifications at the same time; contractors would all prepare estimates at the same time; then the structural-steel plants, the quarries, the material supply dealers, the manufacturers, and the railroads would all be given their entire volume of construction business at one time, and last but certainly not least each job trade would be required on all operations about the same time and then simultaneously released for the succeeding trades as the work progressed. What an economic waste in the tremendous increase of overhead, equipment, manufacturing and transportation capacity such a requirement would entail. What a waste in idle labor, in equipment, and in manufacturing plants in the interim between the peak of work of one year and the beginning of the next year's season. These conditions are not much different from the actual conditions as they exist in those cities which have but a single leasing date during the entire year.

One of the reasons for high wages in the building industry is the tremendous turnover and the contention of the various trades that workmen have only seasonal employment due to the nature of the industry. Furthermore, scarcity of employment in the winter months is a deterrent to potential mechanics who would readily enter the trades were there an all-year demand for their labor.

Lack of constant employment during the year's period means a higher wage rate per hour, and excessive demand for labor in summer means still higher labor costs during that period.

The practice of letting contracts during all seasons of the year would give greater utilization to all branches of the industry and would produce a more normal flow of the volume of business for materials and manufacture, for transportation, for finance and labor.

Under the circumstances it may be asserted that the additional cost of temporary heat and of protecting the materials during the winter will be more than absorbed by the favorable effects on the other elements and on the division of work involved. It may also be confidently asserted that winter construction is not only practicable but highly desirable with direct benefit to owner, builder, and laborer, and with consequent advantages to the community at large.

Another building contractor, H. B. Barnard, cites the following examples to show how little winter construction increases costs:

I am giving you three examples of extra cost involved in winter work on three typical buildings. This cost covers the heating of aggregates, protection of concrete from freezing, keeping the buildings clear of snow, and all the incidental expenses and labor which are in excess of the ordinary costs of construction. On one building with a total cost of \$338,570 the excess cost for winter work as described above was \$3,184 or approximately 0.94 of 1 per cent of the cost of the building. Another building costing \$312,200 required \$620 expenditure for winter work. On the third building, costing \$918,000, there was expended \$5,963 to cover the requirements for winter work.

These jobs were mostly started in the late fall, continued through the winter, and completed during the next spring or summer.

As to the variation in labor costs on these buildings, there seems to us to be very little difference in cost between summer and winter work. The cost of summer work includes the wetting down of brick, keeping the concrete moist with sawdust spread over the top and wetting the sawdust, and the excessive heat on many days produces less results from labor than on some of the coldest days in the winter. Labor, in our opinion, is most productive in the fall and spring months. The excess heat of the summer and the requirements to protect the building in the summer almost equal the excess cost of winter work. In no case have we found the variations in cost caused by weather or seasons to exceed 2 per cent of the total cost of a building.

Of the other building contractors interviewed, one concern, that of Otto Randolph (Inc.), which has been engaged in winter building for a number of years, wrote that during the winter months it gets "considerably better labor efficiency," which compensates to a large extent for the extra expense of winter operations. The increased efficiency is due not so much to the ability of the men to do better work during the winter as to the type of worker available during these months. On the basis of its experience the company figures on as many working-days per month in the winter as during the summer. In the summer months the firm expects to lose several days of work on account of excessive heat, while rain often compels cessation of operations during the spring months. On the whole, therefore, this company loses no more days per month during December, January and February because of excessive cold or snowstorms than it does in the summer months because of rain or excessive heat.

The W. E. O'Neill Construction Co. reports that it finds building costs in the winter no higher than in the summer. The report of this

company also gives figures showing the total values of some of the buildings constructed by it during the winter season and the extra expenses incurred for winter protection. On one contract, valued at \$450,000, the extra winter cost was \$5,000, or 1.11 per cent of the total value of the contract; on another job of \$1,300,000 the extra winter cost was \$6,000, or 0.46 per cent of the total; and on a third contract of \$500,000, the extra winter cost was \$3,000, or 0.60 per cent of the total.

The Lundoff-Bicknell Co. states that during the winter of 1928-29 it erected one of the tallest buildings in Chicago at an approximate cost of \$5,000,000. It was one of the severest Chicago winters, during which the temperature went below freezing nearly every day and hovered near zero a great deal of the time. It was decided to carry on the construction, including the setting of the stonework without cessation, because of the fact that some of prominent tenants had to be in their offices by May 1. In addition to heating the water for the mortar and for the materials, the following provisions were made: The standard 4-foot bricklayer's scaffold was used instead of the usual narrow stonemason's scaffold. In order to protect the brick masons and laborers from the cold winds, windbreaks were erected along the entire length of the building and also at right angles to the center line, within 10 feet of the walls of the building. These windbreaks were made of canvas securely fastened at the floor and at the ceiling. Sixty salamanders were then placed about the floor where the work was in progress. With this protection, the stonemasonry proceeded in the coldest weather and in spite of the high winds. It was necessary to have two floors thus protected—the one in which the stone was being set and the floor above, where the laborers handed the stone to the masons. The cost of the salamander heating was approximately \$3,000, and that of the temporary inclosures \$3,300.

Another company, R. C. Wieboldt Co., finds that winter operations in the construction industry present no engineering difficulty which can not be easily overcome and that the extra costs involved are relatively small and are often offset by the keener competition among contractors during the winter season. This company is of the opinion that the general public is rapidly becoming educated to the idea of continuous operations during the winter months, due to the fact that so many jobs have been successfully carried on during this season. This opinion, however, does not apply to the small bungalow type of house on which the extra winter outlay is so great that it has become the custom in Chicago to lay the foundation of the building prior to the cold weather so that the building could be completed in time for the May 1st renting season.

The firm of Bulley & Andrews gives the following figures showing extra costs of some of its winter operations in construction work: (1) On a telephone exchange building consisting of two stories and basement, built of reinforced concrete with stone and brick exterior, whose total cost was \$250,000, the extra winter cost (for coke, salamanders, tarpaulins, and extra labor) amounted to \$1,600. (2) On a residence with a concrete foundation, wood floors, and stone walls, whose total cost was \$100,000, the extra winter cost (for coke, salamanders, marsh grass, and manure) amounted to \$210. (3) On a gymnasium, a concrete building with a steel frame and stone exterior,

the total cost of which was \$400,000, the winter cost (for steam-plant maintenance, marsh grass, labor, coke, coal, salt, and tarpaulins, was \$3,600. (4) On a chemical laboratory, a concrete building with stone exterior, the total cost of which was \$500,000, the extra winter cost (for tarpaulins, coke, and salt, removing snow, and closing windows with cloth) was \$3,800. (5) On a factory, a concrete frame building with brick exterior on wood piles, the total cost of which was \$300,000, the extra winter cost (for coke, salamanders and labor and removing snow) was \$3,800. (6) On a school laboratory, a concrete building with a stone exterior, the total cost of which was \$600,000, the extra cost (for steam, marsh grass, tarpaulins, removal of snow and closing windows with cloth) amounted to \$3,000.

This company is of the opinion that winter work is profitable to the owner of the building for three reasons: (1) Manufactured products can be bought considerably cheaper during the winter months because during those months most plants are running at minimum capacity and the manufacturers are willing to reduce their margin of profit in order to keep their equipment, plant, and organization at work; (2) the caliber of workmen available during the winter months is nearly always higher than can be obtained during the summer; and (3) winter building tends to equalize the demand for money loans over all the seasons instead of concentrating these demands in the spring.

The contractor, also, benefits by winter work by being able to keep his organization going the year round, by being in the market for different types of material all the year, and by being in closer contact with the market conditions in the industry.

Opinions of Home Builders

The following represents the views of Mills & Sons, a firm of home builders in Chicago which has been in business for the past 44 years and is experienced in the construction of both bungalows and 2-flat apartment houses ranging in price from \$9,000 to \$15,000:

We have always been in favor of continuing construction throughout the winter months even though it costs us an average of \$150 additional expense per building. The additional cost covers the operation and maintenance of concrete protection, purchases of coal and coke, installation prior to the necessary time of hot-water heating plants to provide temporary heat during the plastering, carpentry, and painting operations. This cost, however, represents a very insignificant amount when the operations involve two to three hundred buildings. There are, of course, certain days, and now and then certain weeks, that construction must necessarily be at a standstill owing to unlooked-for subzero periods or heavy blizzards. Also, in the long run the efficiency of the workers during the winter months is decidedly lower than during the other seasons of the year.

With reference to the class of workmanship, we can safely assert that a home built in the winter, providing all of the necessary precautions have been taken, is fully as sound as when erected under ideal conditions in warm weather.

In direct contrast is the opinion of the firm of Albert J. Schorsch & Co., whose policy is to build as rapidly as possible during the summer and fall months, in order to have the houses completed before the arrival of cold weather. The reasons of this company for not building during the winter months are "excessive costs as compared with summer building; inferior workmanship and inferior quality of completed buildings; and the attitude of prospective home buyers

in hesitating to purchase a home constructed during the winter months."

Sears-Roebuck & Co., however, advocates winter construction work because it believes that in the case of small houses "the chances favor a decided economy to the home builder if he utilizes the off season for his operations." The majority of houses built by this company are bungalows. In the opinion of the firm it is custom that leads many people to plan their building in the spring, not realizing that a considerable saving can be made by building in the fall and in the winter. The company favors winter building because good mechanics and dependable contractors are available, whereas the latter are generally too busy to undertake small buildings in the spring or summer season; because in the winter the contractor is willing to take a job at a lower price than he could afford to do in the spring months; and, finally, because building materials can be had at a cheaper price during the winter months.

Opinions of Owners of Buildings

Since July, 1924, the University of Chicago has been carrying on the largest building program in its history, with an expenditure on various types of buildings aggregating, to date, approximately \$30,000,000. In this program construction has been carried on during the winter months, and in only one case was a building closed for the winter, and that was due largely to the difficulties of securing the type of stone needed. The opinion of the university is given below:

The tendency is not to curtail operations during the winter, but this is not entirely under control, since authority to architects and time for drawings and specifications frequently result in asking for bids in midwinter, in which case contracts are let so that work starts conveniently for the contractor in the spring. While the Chicago winters are normally moderate to severe in character, the nature of the sandy soil is such that little or no difficulty is encountered from frost, and modern steam shovels can excavate in the wintertime just as well as in the summer.

The actual expense to the contractor for winter operations has been found to be very small. Concrete has been poured regularly in the cold weather with the usual precautions of heating water and aggregates before pouring, and protecting the work by tarpaulins, windbreaks, and coke-burning salamanders, to keep the newly poured concrete warm for two or three days or longer depending upon the weather conditions. The expense of these protecting measures has been found to be but a slight percentage of the total construction work.

Most contractors in this vicinity are experienced and are provided with the necessary equipment for winter work, and we have had practically no difficulty in securing safe and sound construction in the winter as well as in the other seasons of the year.

The fact that the university operates on the 4-quarter system, with school opening normally on the 1st of October, has made it necessary in a number of projects that the building be so scheduled to be completed in September. This usually requires a good deal of winter work on frame construction and masonry, but it brings the building to the finishing stage in the summer when temporary heat is not required, the saving in temporary heat more than offsetting the small additional cost of the winter work in the earlier part of the project. In a few instances where the buildings produce revenue no consideration has been given to the difficulty of winter construction, since the extra expense involved is usually very small.

We have not observed that labor in the construction work is more efficient in winter than in summer. Under the conditions of work in the university contracts, we find that the chief difficulty from the worker's point of view is that he can not work enough days in the year because one job ends before another begins and unless industry is generally at a high point of activity the men lose a good deal

of time between jobs. Our ordinary specification for doing concrete work is that the methods of heating materials and protecting newly poured concrete shall conform to the architect's requirement. With those precautions fulfilled the work can be carried on at any reasonable temperature. Each of the jobs is constantly in touch with the United States Weather Bureau and has information sometimes 48 hours in advance as to changes in the weather. Frequently, we delay pouring concrete for 24 hours or so to be sure of a rising thermometer. Our specification for setting stone, which is more difficult to protect than concrete, is that stone-setting shall stop at 32° F. with a falling thermometer, but the work can be carried on at a temperature of 25° to 28° with a rising thermometer. * * *

The Commonwealth Edison Co., during the period 1927-1930, carried out a building program amounting to approximately \$12,000,000. The company reports that its schedule was not influenced by winter weather but depended entirely on the requirements of the organization. In the opinion of this company, the disadvantage of winter operations from the standpoint of the owner is largely a matter of increased cost, which is ultimately borne by the owner. While the company had no information showing the exact percentage of the increased cost of winter operations as contrasted with summer work, in its opinion "this percentage undoubtedly varies according to the size and efficiency of the contracting company, and the weather conditions encountered during the winter operations." One advantage, however, is that continuance of operations during the winter "tends toward minimum labor turnover from the standpoint of the contractor. The result of this is a more even employment of the good mechanics, and hence better workmanship and efficiency."

Milwaukee, Wis.

Opinions of Contractors

CONCERNING the question of winter operations in the construction industry in Milwaukee, the firm of Bentley Bros. (Inc.) expresses the following opinion:

Our records of nearly 85 years show that it is only in the past 20 years that we have learned to operate in winter months. This is especially true of the last 10 years. Our organization now functions the full 12 months of the year, and in order to do so we find it necessary to take on a certain percentage of work which will be carried over the winter.

The disadvantages of doing winter work are comparatively slight, if any. The greatest dangers in winter operations are in pouring concrete and having a drop in temperature beyond the point that we are prepared to heat the aggregates and the placed concrete. All other trades, including brickwork, are carried on the same as in summer. We do not advocate, however, doing brickwork unless the materials are heated and a certain amount of protection given the work after the bricks are laid. * * *

Our winter costs of operations are about the same as our summer costs, in spite of the extra expenses incurred for heating purposes. This is traceable to the higher efficiency of the workers who want to hold their jobs and to the lower costs of materials which can be had at a lower price during the winter months. The advantages of winter operations in keeping our organization intact and in giving work to the unemployed men more than offsets any extra cost caused by adverse weather during the winter months. The advantages to the owner of the building are usually expressed in savings in rent costs and in interest on the investment.

Our opinion is that winter work in any climate where the thermometer does not go below 10° below zero is a practical operation, particularly when it relates to large office buildings, hotels, large apartments, and factories. We believe, however, that in minor buildings such as stores, small residences, bungalows, etc., the cost of winter operations will be proportionately larger in percentage, but even in those cases it is possible that a saving in investment and in rentable time may offset the extra cost.

We are a strong advocate of stabilizing the construction industry by doing winter work, and we believe that, given the necessary cooperation of all forces in the construction industry, stabilization can be accomplished.

Also favorable are the views of the S. M. Siesel Co.:

We have performed a considerable volume of work in the nature of structural framing of reinforced-concrete buildings, starting operations in the fall and continuing through the winter season.

Our experience shows that it is entirely feasible to carry on the building operations during the winter period, but there is an increased cost involved which we as builders have absorbed for the purpose of keeping our organization going during the slack winter months. We are presenting a few figures which will give you an idea of the amount of the extra cost involved in carrying on building operations during the winter.

TOTAL COST OF OPERATION AND EXTRA COST DUE TO BUILDING IN WINTER, ON SPECIFIED BUILDINGS, IN MILWAUKEE

Type of building	Total cost of operation	Extra winter cost	
		Amount	Per cent
Garage.....	\$96,000	\$1,957	2.04
Garage.....	167,600	1,749	1.04
Apartment building.....	418,500	4,761	1.14
Apartment building.....	252,600	6,980	2.72

The methods we have used in connection with cold-weather work consist of heating of aggregates by means of steam pipes and steam lines and by using boiler plates and building fires under them, of heating the water and the materials when put into the concrete mixer, and of protecting the placed concrete with waterproof paper and marsh hay and then inclosing the entire floor with canvas tarpaulins and heating the newly placed concrete with coke salamanders burning steadily day and night until the concrete has been completely cured. The object of these precautions is to guard against frost entering into the concrete in any way, shape, or form. However, these precautions are really quite simple and are not in any way excessively expensive.

We found that labor efficiency on winter jobs is considerably better because we get a better type of laborer and the men are more keenly interested in retaining their jobs. Certain operations, however, are performed at a higher unit cost because of the fact that the workers when exposed to cold weather are not capable of working as efficiently as in the warm season. We also find that building materials are slightly lower in cost during the winter months, chiefly because of the falling down of the demand for these materials in the off season.

We repeat that our firm absorbs the additional cost involved in winter operations because we realize that owners will not knowingly pay more money to build during the winter months unless given certain inducements to do so. Sometimes we can use the argument that by starting work in the fall months it is possible to have buildings ready for occupancy on or about May 1, which is still the usual renting date in this territory, and this argument has considerable influence with the owners.

We are greatly interested in any effort that can be made to stabilize the construction business and to spread the operations over the entire year, and we would suggest that owing to the natural hesitancy of private owners that the Government take the initiative and start more of its building projects during the fall months, thus giving a larger impetus to the movement in favor of winter operations in the construction industry.

In contrast with the above is the attitude of the Coddington Engineering Corporation, which reports that, while construction work during the winter months is possible, experience leads to the belief that it is also expensive. The company states that for several winters it has been "absolutely impossible to do any outside work during

January and February due to subzero weather conditions"; that during winter months the days are too short for efficient operation; that considerable time is required each morning for the removal of the protective devices; and that a large amount of labor is needed to clean the snow from incompleted work, from runways, and from stock piles. Also, the firm considers that the labor efficiency is less during the winter months than in summer.

Robert L. Reisinger & Co., which specializes in the building of apartment houses, hotels, and other commercial buildings, finds most of its building activities concentrated during the fall and winter months. This company is of the opinion that it is "feasible, practical, and economical" to carry on construction work during the cold weather, and that the labor efficiency at that time is greater, due chiefly to the better type of workmen available and to the greater effort on the part of those employed.

Opinions of Home Builders

The stand of the Stockdale Homes Co. on the subject of winter building is as follows:

For the past 36 years we have been building homes ranging from \$4,000 to \$12,000 in cost, and about one-third of them were built or finished during the winter months. We usually build our houses in units of 10, putting in the complete basement, windows, and flooring before cold weather sets in, and protecting our basements with straw and manure. The men then start to work on the first house and stick to it until the roof is on and the windows in. Then they start on the next house, working on mild days outside, while on colder and stormy days they work inside the first house which has been inclosed.

As soon as the house is inclosed the heating plant is installed so that the lathers, plasterers, plumbers, painters, etc., can each go to work and not be impeded by the weather.

We have found that the extra cost of heating and protecting the buildings from frost was easily offset by the difference in labor cost, as our men have always been willing to work for less during the winter months in order to have steady employment. In this way we could keep our crews busy the whole year round.

We also found that houses built in the winter stand up so well that not even an expert could tell the season in which they were built.

Fond du Lac, Wis.

Opinions of Contractors

THE following gives the views of the Immel Construction Co. This company has been doing general building work for approximately 35 years, with most of its work concentrated in Wisconsin, Illinois, Iowa, and other midwestern States:

We do not specialize in any particular type of construction and do all classes of general building work, such as public buildings, commercial buildings, factories, theaters, hotels, garages, apartments, residences, etc.

During the past 20 years we have been doing work throughout the winter months of November, December, January, February, and March, and during the last 7 years we averaged a slightly larger volume of construction work during the 5 winter months than during the 7 summer months. This can easily be seen from the monthly records of the total number of men kept on the pay rolls of the company during the years 1924 to 1929, inclusive.

TOTAL NUMBER OF MEN ON PAY ROLL OF CONSTRUCTION COMPANY DURING
SUMMER AND WINTER MONTHS, 1924-25 TO 1929-30

Month	Number of men on pay roll						
	1924-25	1925-26	1926-27	1927-28	1928-29	1929-30	6-year average
Summer months:							
April.....	115	522	277	416	211	280	304
May.....	225	509	314	380	284	369	344
June.....	198	457	378	384	300	290	335
July.....	120	440	404	432	295	289	330
August.....	169	458	525	365	350	500	395
September.....	178	594	523	361	375	514	424
October.....	291	572	578	343	300	594	446
Average, 7 months.....	185	507	426	383	302	405	368
Winter months:							
November.....	340	628	540	421	395	464	465
December.....	408	598	591	314	415	300	438
January.....	315	423	637	206	225	250	343
February.....	381	301	542	138	280	164	300
March.....	497	293	487	191	340	224	339
Average, 5 months.....	388	448	559	254	330	280	377
Yearly average.....	270	483	481	329	314	353	370

These figures clearly show that during the winter months the company averaged a slightly larger number of men employed per month than the average for each year, and a considerably larger number than the average of the seven summer months. This is primarily due to a definite policy of the company to carry a constant volume of construction through the 12 months of the year.

During this period we found no serious disadvantages in doing winter work. On the contrary we definitely prefer it to summer work. There is less loss of time for bad weather and waiting for materials during the winter months and we would under no circumstances consider the elimination of winter construction.

If winter work is properly done, with the necessary precautionary measures, there are absolutely no disadvantages to the owner and there are no differences in the quality of workmanship. The winter precautions required have become of late more or less stabilized. Some of these measures are: Concrete should be placed in the forms not colder than 70° F. and not hotter than 140° F. and should be maintained in the slab at not less than 70° for at least seven days. These temperature ranges control the amount of heat that must be furnished on the job. The heating of materials is therefore a progressive process increasing with the decrease in temperature.

Starting with the first chilly days in the fall, it is sufficient to heat the water only. As the temperature drops lower, usually to about 35°, the sand and stone must also be heated. In heating the aggregates care must be taken to see that all frozen lumps are thawed out of the mixture. All frost and ice must be removed from the forms and reinforced steel before any concrete is placed. This can best be accomplished by the use of a steam jet. Before freezing temperatures are reached it is usually sufficient to cover freshly poured concrete with canvas and marsh hay to protect it during the night. For concrete work carried on when daytime temperatures are below freezing, it is necessary to inclose the structure and furnish temporary heat within the inclosure. For ordinary winter jobs in the Northern States the following practices have become quite general:

Winter plant.—The items of equipment needed for winter operations which vary in number and size with the size of the job and the temperatures are:

Steam boiler, 50 horsepower, 60 pound pressure.

Steam hose, approximately 200 feet.

Steam points, 6-1½ inches for aggregates.

Iron pipe and fittings.

Thermometers.

Tarpaulins.

Salamanders.

Marsh hay (not always required).

Water barrel for mixer.

Water barrels for fire protection.

Heating materials.—A water barrel should be mounted above the mixer and connected to the steam boiler by a pipe valved at the mixer with the end terminating a few inches from the bottom of the barrel. Steam should be allowed to flow to the barrel in sufficient quantities to keep the water entering the mixer at about 150° F.

For ordinary jobs the aggregates are heated by several pieces of steam hose to which are attached 6-foot lengths of perforated pipe drawn to points and inclosed at the end. These points are forced into the pipe near the locations from where the materials are being taken to the mixer. It is a good practice to cover all material piles with canvas to retain the heat and to keep out the snow and ice. Sand and stone should be heated to a minimum of 40° F. and preferably to between 60° and 70°. Where storage bins are used, perforated pipe coils may be placed near the bottom of the bins. If sand and gravel are received in carloads, steam points must be placed into the cars before the materials are unloaded. In all cases all frozen lumps must be thawed out.

A steam hose outlet must be made available at each floor level to be used in removing snow and ice from the forms and from the reinforced steel. This should be accomplished just ahead of the pouring of the concrete.

Protection for concrete.—Before starting to concrete the columns of any story or the floors supported by such columns, tarpaulins must be hung from the beams of the floor to be poured and lashed to the beams of the floor below. The canvas should be held away from the outside face of the exterior concrete 6 to 24 inches, to provide room for the circulation of the heat. The tarpaulins must be well lashed to exclude wind and must reach well below the surface of the floor supporting the columns to be concreted. When the entire floor is not poured in one operation the area to be concreted must be shut off from the rest of the story by a curtain across the building.

Salamanders containing coke or oil fires must be placed inside the inclosures, and the temperature of 70° F. should be obtained in the floor just below the forms before any concrete is poured. This will generally require one salamander for about 300 square feet of floor area. At least one salamander will be required at each exterior column, and in extremely cold or windy weather two salamanders may be required for each column. Heat holes about 8 inches by 12 should be left in the floor poured with one hole approximately for each salamander. These vent holes are for the purpose of allowing heat to reach the top of the slab and at the same time of letting the carbon monoxide gas escape from the inclosed area. Whenever a considerable number of salamanders are used, the firing should be done by men working in pairs in order to minimize the danger of gas poisoning.

During the entire period of winter concreting a detailed record of the following temperatures should be kept: (1) Outside air; (2) forms to be concreted; (3) bottom of concreted slabs; (4) top of concreted slabs; (5) bottom of exterior columns at the most exposed side. Readings should be taken every four hours day and night, and additional heat and protection furnished if the temperature falls below 50° F. at the most exposed points. Salamanders must be fired continuously in small amounts to maintain a uniform supply of heat. Full water barrels and fire buckets must be available as a protection against fire hazards.

It is impossible to have any definite rules as to the minimum time forms must remain in place on winter concrete jobs. The safe time to strip forms should be determined by the particular conditions of each individual structure. Temperature records and tests will help in determining the length of the time during which the forms should be kept in place.

Winter costs.—The maintenance of a winter plant and the expenditures for protecting the work add certain extra outlays to the building costs. These extra costs, however, are so small that they can easily be disregarded for any average-sized structure. Complete cost records kept on 45 different buildings erected by the company in the course of 4 years, varying in amounts from \$11,000 to \$644,000 per structure, give us the following results: Total value of contracts covered by the 45 jobs, \$6,100,800; total cubic yards of concrete poured, 83,465; total cost of concrete work including forms, \$1,216,852; total cubic yards of concrete poured during the winter months of November to March inclusive, 35,716; total extra cost for winter operation plant, including fuel and extra labor cost, \$62,279. It can readily be seen from these figures that the extra winter costs amount only to about 1 per cent of the total value of the jobs covered, and about 5 per cent of the total cost of the concrete work.

The advantages accrued to the contractor from continuous operations during the winter months by far exceed the extra winter costs presented above. Neglecting as comparatively intangible the economies due to lower prices of materials during the winter months and to the higher efficiency of labor due to the better type of workmen available in the off season, the advantages due to the ability of the organization to function over a 12-month period and to utilize the equipment over the entire year will alone more than offset the extra costs.

The advantages to the owner of the building depend entirely on the time element when the completion of the building is desired. There is no possible excuse, with modern methods of construction, for the closing down of a project for cold weather with the consequent delay in completion and increased carrying charges.

Eau Claire, Wis.

Opinions of Contractors

THE following represents the opinion of the Hoeppner-Bartlett Co., building contractors, on winter construction in Eau Claire, Wis.:

The construction of buildings during the winter months, under climatic conditions as they prevail in Wisconsin, was formerly considered an impossibility, and it was customary in this territory to cease building operations in the fall. It was not until after the war that the necessity for construction overcame the fear of winter building, and experience has since shown us that winter operations have very few terrors and can be carried on with very little additional cost over summer building, if all factors are taken into consideration.

The extra winter costs are incurred because of the necessity to heat the aggregates used for the concrete and to maintain a sufficiently high temperature in the building to keep the newly poured concrete from freezing. The latter is usually accomplished by means of inclosures and fires supplied by coke or oil-burning salamanders.

Of recent years there has been considerable opposition in this State to the use of coke fires, on account of the carbon monoxide gases which arise from the flames. We have had a good many men overcome by these gases, and we warn our men to keep out of the rooms where the coke is burning. The State of Wisconsin has recently passed an ordinance prohibiting the use of open salamanders within inclosed buildings. This will probably force the contractors to use covers over the salamanders, with smoke pipes leading the gases away from the room.

The actual cost of winter operation is considerably more than summer operation, notwithstanding the fact that many writers are trying to prove the contrary. But in spite of the higher cost, the spreading of overhead of a contractor's organization over 12 months instead of 7 or 8 months is a very decided factor and advantage for winter construction. The theory has been advanced that labor can be had at a lower price in the winter than in the summer and that labor would be more efficient in winter because of a careful selection of the workers used in the slack months. We did not find it so. A man can not work so well in severe weather as he can in moderate temperatures, because if he wears enough clothes to keep warm he is hampered in his work by the clothing, and if he does not wear sufficient clothes he is too cold to be able to work well.

The cost of heating a building during construction through the winter months when the shell of the building has been built during the summer is usually larger than the cost of the heating of the materials used in the construction of the shell proper. This is a decided factor in favor of winter construction of a project which requires 10 or more months for completion.

Brickwork on winter construction in this climate is not nearly so difficult as one would suppose, but it can not be carried on successfully if the temperature drops below 10° below zero. For this reason brickwork is usually done on selected days when the temperature shows a rising tendency.

We do not attempt to carry on work when the temperature falls below zero, as the efficiency of the workmen is too much reduced by the severe cold, but the days when the temperature is below zero are comparatively few even in this section of the country. However, it must be admitted that winter work does not progress as rapidly as summer work.

Opinions of Home Builders

Walker Bros. (Inc.), specializing in home building, reports that it continues building operations during the winter months by taking the necessary precautions of using artificial heat and covering. In the opinion of this firm continuous operation is advantageous mainly because it keeps the organization of skilled labor the year round.

Minneapolis, Minn.

Opinions of Contractors

THE attitude of C. F. Haglin & Sons Co. on the question of winter operations in the construction industry in Minneapolis may be taken as representative of the views of the majority of contractors in that city:

Our work consists principally of heavy building construction, such as banks, office buildings, warehouses, factories, etc., and the majority of the work which we do is carried on throughout the winter as well as the summer; in fact we know of no job which we have had in the last 15 years which has been shut down permanently on account of winter weather, although occasionally work is stopped for a number of days because of the extremely cold temperatures.

We have been carrying on concrete work throughout the winter for over 20 years, pouring concrete in temperatures which were sometimes as low as 20° below zero. We find that the extra cost necessitated by the precautions, equipment, fuel, etc., which are required for winter operations, run about 1½ to 2 per cent of the total cost of the job. For smaller jobs, however, this percentage is materially increased.

We also find that we lose considerable efficiency in labor during winter construction. But we advocate winter building chiefly because of the advantage of continuous operation and because it supplies work to the laboring men at the time when work is most needed.

Splady & Haagenon, a company which has been carrying on construction work for some 30 years, specializing in the larger types of buildings, writes that during its experience it has "come more and more in contact with the problem of winter construction work." The disadvantages attending winter work are described as follows:

In foundation work the removing of frost is very expensive when foundations do not extend beyond a short distance below the frost line. This is particularly true in 1-story factory and industrial buildings which have no basements except for a small section for a heating plant. For this reason an inexpensive factory building which must spread over a great area is penalized very severely during the winter months because of so many piers and footings required to be put up in the cold weather. In taller buildings with deeper basements the cost when assessed per square foot of floor area is not so great and the extra winter cost of excavation is comparatively negligible. Winter construction requires that all concrete foundations and floors of the buildings be poured into the forms insured against freezing of the concrete until at least several days old. For this reason the forms must be surrounded by tarpaulins and other protections excluding the cold, and additional heat must be provided to keep the newly placed concrete within a certain temperature. In order to make progress on a job it is sometimes necessary that three to five floors be inclosed with tarpaulins and a system of heating maintained in these floors. The brick and masonry work also require canvas inclosures and heating devices to keep the mortar from freezing and to enable the men to proceed with their work. Winter construction requires that freezing rain and snow be removed from the reinforced steel, from the floors, beams, and columns, and this can best be accomplished either by torches or steam jets.

During winter construction a cold morning will often find the job without the usual force of men, who reach their own conclusion as to whether or not the day is satisfactory for work before they leave home. It is impossible to use a fractional crew and the rest of the men are therefore laid off for the balance of the day.

The advantages of winter operations from the company's point of view are:

The type of labor available in the winter time is somewhat better than the average of the summer on account of the slackness of the season for many trades. Although there has been no decrease in the rates of pay during the winter months, we feel that lower costs can be secured by picking a more efficient type of worker from the field of unemployed.

We do not believe that, from a construction standpoint, there is much to be said of the economy of winter work. Expressed in terms of actual costs, the disadvantages of winter construction can hardly be balanced by its advantages. We do believe, however, winter construction helps in stabilizing employment and gives the workers in the industry a security on the job which is not present when construction stops during the winter months. This tends to create a better condition not only in the construction industry but in business generally, which in turn benefits the construction industry.

The Madsen Construction Co. gives the extra cost of its winter operations as varying from $\frac{1}{2}$ of 1 per cent to $1\frac{1}{4}$ per cent of the entire cost of the building, and finds that concrete and masonry work can be done just as successfully during the winter months as in any other season of the year.

Opinions of Home Builders

The following quotation from the report of McCoig & Jessup gives the attitude of a representative firm of home builders on the question of building homes during the winter season:

We have been building homes and apartments in Minneapolis for the past 27 years and specialize in residence construction, both large and small. During this period we have done quite a bit of winter building, but not as much as we would like to have done for the reason that people seemed to have the idea in this climate that building could not be done during the extreme months. Recently, however, the public has been realizing that they can have their homes built in the winter and have them constructed fully as satisfactory as they are in the summer months, provided, of course, the building firm knows how to handle winter work. The only precautions that we have to take are to protect against freezing of concrete work and plastering.

The average price of our homes runs from \$5,000 to \$25,000, and we find that it costs us no more to build in the wintertime than in the summer. The cost of materials is somewhat less in the quiet season and our mechanics are willing to work for a little less per hour in order to help us obtain winter work and give them steady employment. We also find that our labor is more efficient in the wintertime when there is available a large supply of good men.

We are thoroughly convinced that the home built in the wintertime if properly handled is fully as good as the one built in summertime, if not better. The reason why the house may be even better is that it does not get soaked so much by heavy rains which prevail during the summer months.

About the only operation which we can not safely perform in wintertime is the application of exterior stucco. This work is usually done after April 1 when we are sure that the stucco will not freeze before it sets thoroughly. We are firmly in favor of building operations during the winter months because we believe that it will provide work to the men who suffer from unemployment due to the cessation of operations in the construction industry.

The Neumeier-Johnson Co. writes that it usually plans on having all excavation work and the installation of concrete footings done before the frost sets in. It is of the opinion that winter construction costs are somewhat smaller than during the summer, because of the savings effected in purchases of material due to seasonal slack of business and the availability of better mechanics, although the rates of wages are usually maintained. It also states that "home-selling conditions are better in the spring of the year, which is another favorable inducement for winter building."

St. Paul, Minn.

DURING the fall and winter months of 1925-26 the Builders' Exchange of St. Paul, Minn., carried on an effective campaign in order to educate the builders and the public alike to the idea of winter building. The slogan of the campaign was "St. Paul builds in the winter—it pays." A sum of \$4,500 was raised by voluntary subscription from the members. The campaign was directed by a special committee representative of each of the groups of contractors, subcontractors, material supply men, equipment dealers, and bonding companies. The campaign was carried on primarily by means of publicity in the local press and by distributing a special booklet under the same slogan. Window cards, pictures of winter building projects, and winter building slogans were displayed in hotels, banks, lobbies of public buildings, etc. The principal reasons advanced in this campaign in favor of winter building were: First, it is cheaper to build when the demand for labor and materials is less than during the rush days of the spring and summer, and winter operations insure prompt delivery of materials and better workmanship on the job. Second, the demand for building materials and for building-trades workers helps to keep other workers busy and thus indirectly benefits business at large. Third, winter building operations result in continuous employment for the laboring men and do away with the discontent resulting from seasonal slackness. Fourth, winter building is absolutely feasible and practical, as can be proven by the millions of dollars' worth of winter building carried on during that season.

The members of the Builders' Exchange believe that the campaign was a success, worth the effort and the expenditure. It resulted in more business and more employment. The sight of people going and coming from work on building projects during the winter months had a psychological effect which was very salutary for the building industry and for business in general.

Opinions of Architects

The views of the firm of Clarence H. Johnston follow:

We do not have an open and closed building season in Minnesota. Plans for buildings are presented throughout the year, and as soon as they are completed contracts are awarded and the work proceeds irrespective of the season of the year. If the building is large, outside brick and masonry work proceeds throughout the winter months with an occasional winter lay off on such days as the temperature drops to 20° or 15° above zero. In the smaller buildings it is possible to have the shell inclosed before the real cold weather sets in. Temporary heat is then provided to continue with the interior work.

I can recall, 25 years ago, when it was customary to stop building work about the middle of November, covering up the footings and walls and closing down the work until the middle of March. This has all been changed now. The modern methods of construction and the utilization of heating devices for the concrete and the mortar, as well as the aggregates, the tarpaulin inclosures, and the covered swinging scaffolds, have practically eliminated all hazards so far as carrying material is concerned, as well as for the protection of the workmen during the winter months.

The firm of Ellerbe & Co. writes that it recommends winter construction to its clients whenever the occasion requires, for the following reasons:

(a) It completes the building a certain number of months earlier and thus gives to the owner the opportunity of earlier income from the building;

(b) In the long run the total cost of building operations if carried on throughout the winter is less than if the operations were to be interrupted on account of cold weather; and

(c) The advantages of winter building greatly exceed the extra costs which are required for winter operations, because the contractors and manufacturers are anxious to handle winter work at a smaller margin of profit.

Opinions of Contractors

The Paul Steenberg Construction Co. writes as follows:

We have been in the building construction line for a period of about 25 years, with most of our work concentrated in the State of Minnesota.

Strange as it may seem, all of our major operations have been carried on through the winter. In the winter of 1924-25 we erected a large convent costing \$500,000; in the winter of 1925-26 we built a seminary costing \$1,250,000; in the winter of 1927-28 we built a large dormitory at a cost of \$500,000; in the winter of 1928-29 we did practically all the masonry work on an auditorium costing \$1,250,000; in the winter of 1929-30 we built a large produce building at a cost of \$150,000. We had a lot of snow and very cold weather all the way through this job. It was started in November and completed May 1, with all the work done during the winter months. This winter we have been working on a large 32-story bank building which is to cost about \$3,500,000. It is true that this season we had an exceedingly mild winter, but all the conditions for protecting winter work had to be met in order to be prepared against an emergency or a sudden cold spell. For instance, in preparing for the pouring of concrete we had five floors inclosed with canvas at a time. The floor on which the placing of concrete took place was completely inclosed with canvas on all sides and also kept at a constant temperature of about 70° F. This was accomplished by means of coke salamanders kept underneath the slab on the floor just below. This constant temperature was maintained for a period of not less than five days in order to guarantee the absolute protection of the concrete against freezing.

As to the manner of laying bricks and stone during cold weather, we usually use a hanging scaffold entirely inclosed with canvas on all sides and a small air-tight stove is placed near each worker to keep the mortar from freezing and to keep the man warm while at work.

It is our candid opinion that it takes no more precaution to work in the winter even in Minnesota than it does in the summer time. During the summer months, when working under the hot rays of the sun, several laborers are compelled to sprinkle the concrete continually to keep it from drying or setting too soon. The concrete must be covered with sand or paper during the summer months, which offsets the cost of using straw or hay during the winter months. Because of the comparative slackness of work during the winter months, it is possible to pick a crew of workers which will prove much more efficient and to better advantage than it is possible to pick during the rush summer season. If we were to say that there was a difference in the cost between summer and winter operations, our honest opinion would be that it is cheaper to build in the winter time.

As to the other advantages in favor of winter building we insist that the labor in the winter months is generally more efficient than in the summer; raw materials are somewhat cheaper during the dull seasons; also many manufactured articles used in the construction industry are cheaper during the winter months.

We earnestly try to sell our clients the idea of winter operations, giving the reasons outlined above, and we now find that construction work as a whole is carried on during the winter months almost to the same extent as in the summer, with the exception of certain classes of work such as road building and street work, which can not be done economically during the winter months.

The firm of L. H. Sault states that during the last 15 or 20 years there has hardly been a year in which the firm has not done a certain amount of concrete work during the winter months. It is of the opinion that the extra cost involved in winter operations is often offset by the contractor's willingness to accept a smaller margin of profit in order to keep his men occupied the year round.

There is also to be considered the increased efficiency of a selected class of labor available for winter work which can not be had during the summer rush. Sometimes lower rates of wages prevail during the winter season,

As to the heating of the building when the she'll is completed, this cost depends on the length of time the heating is required and on the nature of the building. For a very plain garage building this cost might be less than 1 per cent, perhaps as low as three-quarters of 1 per cent. In more complicated buildings with heat required throughout the winter the cost of interior heating might be as much as 5 per cent.

We believe that winter operation in the construction industry is advantageous to all parties concerned. It enables the contractor to operate the year round with possibly lower wages for the men in the construction industry. After all it is not the rate of wages but what the men earn during the entire year that is paramount. If the men are out of a job all winter the summer rates must be sufficiently high to supply the needs of the worker for the whole year. With continuous operations during the entire year the rate of wages can therefore be considerably lowered.

Material prices are always lower in the winter months; contractors and subcontractors are also willing to take jobs on a smaller profit. As to the owner of the building, once he has decided to build and secured the money for his project, it is to his interest to have the building completed as soon as possible in order to reduce the time during which his investment remains idle.

Views of Small Home Builders

The opinion of Conrad Hamm expresses the attitude of small home builders in St. Paul as to the problem of winter construction work:

Our business is exclusively the designing, building, financing, and modernizing of homes, and in all cases except where we have built for demonstration purposes all of our homes are sold before we start their construction.

About six years ago we made a very thorough study of winter building in connection with an investigation for the purpose of increasing our sales of homes. We have found that only approximately 45 per cent of the men engaged in the construction industry were home owners. Ninety-five per cent of the remaining workers in the building trades were willing and anxious to be home owners, but due to the fact that there was considerable winter unemployment in this industry they felt that they could not possibly make the necessary monthly payments which were required over the entire year.

We had experienced in years before that the men coming to us in the spring and applying for work were in a great many cases badly in debt, due to the fact that they had lost two, three, and four months of employment during the winter season. This led us to the conclusion that something must be accomplished in the construction industry which would provide for the continuous employment of at least a fair percentage of the men involved.

We also found that a very large proportion of our local people were not sold to the idea that one could build as good a home in the winter months as in any other time of the year. Some of our bankers and architects also had the notion that it was not advisable or practical to build a home in the winter.

After considerable thought we finally decided that it was not necessary alone to sell the idea of winter building to the prospective owner but to the city at large, to the bankers, and to the merchants, and to prove to them that we could build as good a home in the winter as at any other period, do it efficiently, and with actual lower cost to the owners. In order to accomplish this we decided to demonstrate in an actual way, step by step, how the work is being done, as well as the actual results in the completed building.

With this in mind in 1927 we undertook to promote, with the assistance of the material supply houses and manufacturers, a winter-built demonstration home, which was undertaken through the combined efforts of 50 firms, at a cost of about \$15,000. The work was started on the 3d day of December, and each week we carried considerable newspaper space and other forms of publicity, inviting the people to make a thorough inspection of the work, to see how the work was done, and watch the results. We had some 500 to 3,000 people each Sunday investigating the process of the building, which proceeded in a temperature ranging from 20° above to 20° below zero. At the time the excavation was started we had 18 inches of frost, and the temperature went as low as 20° below zero before we completed the foundation. The records will show that we had an unusually cold winter, and we are of the opinion that at no time could we have undertaken such a campaign with weather conditions more against us than in the winter of 1927-28.

The building was completed on the 3d day of April, was furnished by the leading department stores, and thrown open to the public each day from 2 to 9 p. m. for two weeks. By actual count we had an attendance of better than 26,000 people, who went through in groups and in each case an explanation was given as to why the home was built during the cold months. After the showing was over the building was sold for \$12,000, and the proceeds were used to defray the advertising and publicity expenses and part of the labor cost.

The fact that this demonstration had been such a success made this same group of 50 firms anxious to try it again, and house No. 2 was undertaken in the following winter, and house No. 3 the winter following after that. As a result, we are convinced that at least 80 per cent of the people of St. Paul are sold to the idea that it is possible to build as good a home in the winter months as at any other season of the year. Now our actual business shows that we are starting construction nearly every month of the year. We are convinced that similar studies in other districts would bring about equal results and would overcome the "bugaboo" of winter building.

We recognize that the handling of these demonstration houses was not representative of the average type of building. We believe that in our climate all excavations for winter building should be done and the foundations put in before the frost sets in. The framing of the building and the superstructure can be completed during the most suitable times throughout the winter. Under these circumstances we know that the cost will not exceed those of summer building, with possible savings in a number of cases, because our experience shows that one can buy materials and hire the better type of workers at a somewhat lower rate than during the busy seasons. We also get more efficiency out of our help because they are anxious to retain their jobs during the slack months, and the subcontractors are also willing to take the job at a lower margin than that prevailing during the summer months.

John L. Wilson, specializing in building of houses ranging in price from \$8,000 to \$15,000, writes that in the last 15 years the firm has built about 150 houses during winter months. It is the experience of this company that none of these houses was affected adversely by the cold weather. It is this firm's practice to put in the foundations before the frost sets in and get the building inclosed as quickly as possible; it can then install the heating plant and proceed with the interior work irrespective of the weather. The reasons given for advocating winter building of houses are as follows:

It gives steady employment to labor; houses built under contract are ready for occupancy in the spring, and the owners are given a chance to put their yards in shape during the spring and summer months. Houses built for sale are ready for the spring market, which is in this section as good as the fall market. Besides, if they are not sold in the spring there is the advantage of the longer season during the summer and fall months, and if they are not sold by September one may rent them to advantage in the fall.

Fluctuations in the Construction Industry in Southern States

As in the section relating to winter building in the Northern States, because of the similarity of the opinions expressed and lack of space one or two typical opinions each of architects, contractors, etc., have been selected for quotation at length, those of the others interviewed being summarized merely.

Atlanta, Ga.

Opinions of Architects

THE reasons for the fluctuations in the building industry in Atlanta, as seen by the architectural firm of A. Ten Eyck Brown, are as follows:

It is undoubtedly true that we are affected in this city by a seasonal fluctuation in the construction industry which in our opinion is chiefly due to the notion of the

people contemplating building that nothing can be done until spring. There is no reason in this particular territory why building operations could not continue all the year round, as our freezing or cold spells hardly ever continue more than a few days at a time.

Contractors in this territory do not carry on their work in very cold weather because they are not equipped, as in the case of the North or the East, either with the necessary information or with the equipment needed to continue operations during the winter months.

Any information which would help educate the people here that construction operations could be carried on during all the seasons of the year will prove helpful to the industry. In fact we are of the opinion that it is cheaper to build during the off season, chiefly because more and better workers are available and prices of building materials are somewhat lower during the slack months.

The firm of Cooper & Cooper writes as follows:

Perhaps the fact that the winter months are less severe in the Southern States than in other portions of the country has been somewhat overstressed. It is true that we are not much troubled with snow, but a glance at the weather chart will show the amazingly rapid rate in which temperature changes are effected in this section. This makes the pouring of concrete an extremely hazardous operation, since ideal conditions at the beginning of the day's work may change to sub-freezing in a few hours. In addition to this, from December to April our rainfall is considerable, causing the clay soil to become thoroughly saturated, which not only makes it hard to work during those months but makes it also dangerous for the building after the clay has dried out. These conditions, together with irregular working hours, frequent rains and cold spells, mitigate strongly against winter operations. Another and probably even stronger reason against winter building is the general lack of knowledge on the part of contractors, builders, and others connected with the building trades, of proper, efficient, and economic methods for preventing damage caused by sudden freezes. In the North freezing conditions are anticipated and prepared for, while in the South they are not prepared for and the problem of damage caused by inclement weather is largely left to luck.

The firm of Robert & Co. reports that in Atlanta most people who are considering the construction of a residence, store building, or industrial plant endeavor to have the plans prepared and contracts let so as to begin the work of building by April 1. This, in the company's opinion, is done for the purpose of saving money, as a certain amount of time is lost during the months of December, January, and February, partly on account of cold weather, but chiefly because of the rainy season during this time of the year, and this lost time increases the high cost of the building operations.

In the opinion of Hentze, Adler & Shutze, the dropping off of building operations during the winter months is due to purely psychological reasons.

Opinions of Contractors and Builders

In the opinion of the Shelverton Construction Co., what seasonal variation there is in the volume of contracts let in Atlanta is mainly in those for residential work.

It is our opinion that, on the larger commercial and industrial buildings weather offers no hindrance to construction during the entire 12 months of the year. While we may have temperatures as low as 10° F. or even lower, such instances are rare and very brief, and do not interrupt the construction work any more than a severe rain in the summer.

From the standpoint of a contractor there is no objection to continuing work the year round and we have never heard in this locality of work being stopped on account of the approach of winter.

As to the seasonal fluctuations in residential work, apartment buildings usually are begun in the early part of the year with the object of having them completed by September 1, which is moving day in Atlanta. As the majority of leases expire on that date, landlords and owners aim to have their buildings completed on or before September 1. The same explanation would apply to schools and colleges which begin their seasons at about that time.

Following is the opinion of J. S. McCauley Co.:

While statistics may show that building construction in this territory drops during the winter months, we do not believe that there is an economic reason for this stoppage or that construction work can not be carried on satisfactorily during the winter months. Our winters are not severe and freezing temperatures hardly ever continue more than a few days at a time.

The reason that we do not build more in the winter season is due to the fact that the public has accustomed itself to thinking that the season is beset with hazards and all manner of unfavorable conditions to construction work.

Most of the larger building contracts that we have handled have been carried on during the winter months. These jobs were secured in the fall and the construction work extended through the winter and was completed either in the late spring or in the summer.

After spring approaches and the days begin to get warm, the public naturally begins to consider building, not because the work can be done any better or any more economically, but this is the season that brings thoughts and urges to build. The more practical thing to do would be to have the house constructed during the winter months, then the planting and landscaping completed during the spring or summer season.

The firm of A. K. Adams & Co. writes as follows:

We are industrial builders and specialize in factories and the heavier types of construction. We are heartily in favor of the distribution of construction work over a 12-month period instead of 8 months. For some reason the major construction work in the South begins during February or March and ends in September or October. During the remaining months of the year there is comparatively very little work in progress. Our winters throughout the South are very mild and are not serious enough to interfere with the building program.

Although construction costs would be slightly increased during cold weather, we feel that this additional cost would be offset by the contractor's willingness to work on a lower margin of profit during the slack period. The placing of construction work on a 12-month basis will also tend to stabilize labor and lower construction costs. For example, brick masons would be willing to work for a smaller wage scale if they were certain of 12 months' continuous work.

The Griffin Construction Co., which specializes in heavy construction work, such as office buildings, churches, theaters, industrial buildings, etc., reports that its operations are carried on in the winter-time with the same speed and the same economy as in the warmer months. The firm builds no homes or apartments, and in its opinion the construction of that type of building is distinctly seasonal, due chiefly to Atlanta's single renting date, September 1. The weather in Atlanta, however, should have no bearing on the ease or difficulty in prosecuting construction work, for while temperature sometimes drops as low as 20°, this happens only rarely and seldom lasts more than from 10 to 30 hours. At such times, the company suspends operations, as it uses no protective devices. This firm states that it loses no more time during the winter months on account of cold and rain than it does in summer on account of heat and rain.

The firm of Brazell, Miller & Newbanks does not believe that there are great variations in the volume of construction in Atlanta during the year, and to prove its contention, gives the average of monthly

building permits issued in Atlanta over a 20-year period (1906-1925), as follows:

	Average		Average
January.....	\$700, 000	July.....	\$875, 000
February.....	650, 000	August.....	700, 000
March.....	800, 000	September.....	725, 000
April.....	1, 500, 000	October.....	750, 000
May.....	900, 000	November.....	600, 000
June.....	850, 000	December.....	625, 000

The Massey Realty Co., which specializes in industrial and commercial types of buildings, such as stores, warehouses, hotels, etc., reports that there is a decided lull in its work during the months of January and February, particularly as far as new jobs are concerned.

During these months it rains more often, and occasionally the temperature drops sufficiently low to cause sleet, snow, and freezing. Under these conditions the men at work are decidedly uncomfortable and can not produce the quantity or the quality of work which would make it worth while for the builder to continue operations. We therefore do not consider it economical to start any new building projects during these months unless the owners need the building for special reasons.

The Flagler Co. writes that for nearly 20 years it has paid no particular attention to the season of the year, and finds, that except there is somewhat more rainy weather in winter than in summer and an occasional freezing day or two, its operations go on just as well in winter as in the summer. In its opinion the delays due to rain and cold in the winter are probably more than offset by the extreme heat in the summer. This firm also points out the more plentiful supply of skilled labor available in the winter.

New Orleans, La.

WITHOUT exception the architects and building contractors interviewed agree that weather conditions in New Orleans have nothing to do with the fluctuations in the construction industry, and that the main cause of the seasonal fluctuations lies in the fact that New Orleans has only one leasing date. All renting and leasing agreements are made as of October 1st, which condition automatically throws the bulk of construction work on the summer months.

The views of the architects and large and small contractors are so strikingly uniform that the letters of only the two covering the situation most comprehensively are given for each group.

Opinions of Architects

The firm of Favrot & Livaudais (Ltd.) writes as follows:

It is our opinion that the building industry could carry on its operations continuously without interference by the weather from the first of January to the first of January without interruption.

Our trouble in the city of New Orleans is this: All leases are made as of October 1. It is natural therefore that in proposing improvements, changes, or new buildings, the completion of all operations will be as nearly as possible on or about October 1. This naturally throws the bulk of construction work on the spring and summer months.

Several attempts have been made in the last 8 or 10 years to establish a system of staggering leases, and our Association of Commerce is trying to get this measure before the public, but the results are very slow in realization.

The letter of Wogan & Bernard describes the situation as follows:

It is our opinion that the fluctuation, or rather the quasi stagnation, in the building industry in this section during the winter months is due primarily to the fact that leases are made here beginning with October 1. It has been our experience to witness the postponing of certain projects for several months, for the reason that if begun the building would have remained unoccupied for several months awaiting the lease period; and truly there seems to be no point in beginning the construction of a building which must be delivered by October 1 at any time prior than that which is absolutely necessary for the building operations.

This system results in clogging up the offices of the architects at one time of the year, with idle periods at other times. The same is true of the contractors and subcontractors, with result of lower efficiency and lower workmanship done during the busy season. A change of the leasing system, particularly by adding one or more leasing dates during the year, will greatly relieve the situation.

Opinions of General Contractors

The opinion of the firm of J. A. Petty & Sons (Inc.), as regards winter building in New Orleans is as follows:

We have been in the building business for over 25 years in the city of New Orleans, and our experience has been that construction in this territory is not affected by winter conditions. In other words, construction can be carried on 12 months in the year.

Our rental seasons start October 1 each year and all leases are made from this date. This has considerable bearing on the volume of construction for the reason that owners do not care to have buildings completed a long time before this date. If it is apparent that completion can not be accomplished by October 1, the project is put off for the next year. We found a similar condition in connection with building of schools which are planned to be opened either in September or in the middle of January. On the whole any system which would eliminate these concentrated moving dates will in our opinion also eliminate the ups and downs in the construction industry in this territory.

Gervais F. Favrot, general contractor, gives his opinion as follows:

The renting season in New Orleans is from October 1, and it is our opinion that the public has become accustomed to starting construction work with the view of completing by that date. Weather conditions in New Orleans and the surrounding territory are such that greater efficiency can be obtained from labor during the winter months. The summer months are tropical and very depressing, making it practically impossible to get maximum efficiency of labor employed.

Opinions of Home Builders and Subcontractors

A. L. Redden, home builder, writes as follows:

It is true from our experience of the past 10 years that there is a decided slump in building operations during the months of December to May, with a rush during the late summer months and particularly prior to October. This is due to a set rental season at October. Our weather conditions have practically nothing to do with our building activities. We are of the opinion that an additional rental date will help the situation, especially from a residential point of view.

The Allied Sub-Contractor Group (Inc.) states the case thus:

Stabilization of the building industry so that there may be a continuity of the work throughout the 12 months of the year is extremely desirable. We are favored here by weather and other physical conditions which make it possible to continue operations every day of the year. We have, unfortunately, only one moving date, and most contracts are made from October 1 to October 1. Therefore, there is a rush to get all buildings finished or repaired by that season. After October 1 there is naturally a let-up in building operations. It would be very beneficial to the entire construction industry to have it organized on a 12-month basis rather than suffering from certain months of laxity in the trade. It would furnish continuous employment to skilled and unskilled labor, would improve business in general, and would undoubtedly result in a lower construction cost of building operations.

EMPLOYMENT CONDITIONS AND UNEMPLOYMENT RELIEF

Experience of Tool Company in Stabilizing Employment

AN ARTICLE, by James W. Hook, in *The Service Letter on Industrial Relations*, May 30, published by the National Industrial Conference Board, discusses the responsibility of the individual industry to its stable workers and gives an account of the plan followed in the company of which he is president during the present emergency. Mr. Hook is chairman of the Industrial Committee of the New England Council and a member of President Hoover's Emergency Committee for Employment.

When it became apparent in the latter part of 1929 that a serious depression was imminent Mr. Hook states that the officials of his company, The Geometric Tool Co., attempted to forestall the effect upon its employees, and as a first step toward stability of employment the places of employees voluntarily leaving their jobs were not filled. As a result of the application of this policy the working force was practically stabilized by February, 1930, and normal working time was maintained for the entire force until the latter part of June, 1930, at which time the full effects of the depression began to be felt by the firm. The company had planned for the period when it would be necessary to decrease production, and when the necessity arose the available work was divided among the force, giving those with dependents a larger share than those without. The plan for steadying employment included, in addition to the regular factory operations, thorough cleaning of the factory, painting, relocating machinery, and general repair of machinery and fixtures. Even the most highly skilled workmen did such work and were usually glad to get the extra work even though in some cases it paid much less than their usual rates. The spirit of cooperation evidenced generally by the workers was in part due to the fact that the superintendent and foremen both directed the work personally and took an active part in it. Workmen were not urged by the foremen to accept the extra work, but it was offered to those who were most likely to accept it by reason of their home needs.

At the time the article was written, the factory had had 45 weeks of short-time work, during which time the business had shown a recession of 50 per cent from the corresponding period in 1929 and of 42 per cent from that of the same period in 1928. In spite of the great reduction in the volume of business the force had been reduced only by voluntary quits and discharges for incompetence and for serious infractions of the rules. Throughout the period a weekly record was kept for each employee which showed the effect of the depression upon time worked and wages. The record for each employee showed the name, age, the number of dependents, the hours worked and the earnings per week, and the date of employment. The average hours worked and the wages for each 9-week period were computed and in another column was shown what the normal work hours and earnings of each man would have been had he worked

full time. This record has been found by the management to be of great value in distributing the work efficiently and with fairness to the workers. In addition to this, the figures showed the precise effect of the depression, not only on the individual employees, but also upon departments and upon the business as a whole, and it has been possible for the firm to estimate the amounts it would be necessary to set aside in order to provide a system of unemployment benefits. On the basis of its experience in the present depression the firm considers that if a reserve of one-half of 1 per cent had been set aside during the years 1923-1929, the pay of its stable group of employees could have been maintained for a period of 40 weeks. The figures, therefore, have shown the company that reserves could be built up during six or seven good years to maintain wages and salaries of the stable group of employees at 80 per cent of normal for those with dependents and 60 per cent for those without dependents during long periods of short-time employment.

The writer maintains that industry must accept its responsibility towards the stable workers who are the most important single factor contributing to the success of any business, and that efforts must be made by individual industries to provide such workers with steady employment if we are to avoid some kind of State unemployment insurance system. The stable workers, he considers, are those who have been continuously on a pay roll for at least a year immediately preceding a business depression which is severe enough to require a contraction of forces or a shortening of hours. The casual or floating type of worker who drifts from job to job, he thinks, is a less direct responsibility upon management, and that while some kind of employment must be provided for such workers this may be done by advance planning of public works.

In an address¹ at a conference of representatives of the country's smaller industries held at Silver Bay, N. Y., Mr. Hook stated that the country is headed directly for "some sort of so-called public employment insurance" unless industry takes steps to maintain the incomes of stable workers in periods of depression. He stated that the experience of his firm has led him to believe that it is possible for the individual industry to care for its stable workers without very great expense, and he believes that industry should voluntarily assume this obligation. Each unit of industry, he believes, should make a study during the present depression of what it would cost to protect the incomes of stable employees, expressed in definite percentages of normal pay over definite periods of time, and when the present depression is over plans based on the data obtained from these studies should be made for meeting the next depression. These plans should include a definite stabilization program in addition to the setting aside of reserve funds during the next cycle of prosperous years. Whether the funds should be created jointly by employer and employees he considers is a question which each industry should decide for itself; but if the reserves are set up both by industry and the workers, he believes the funds should be kept separate under fixed trust agreements which "would provide safeguards peculiar to the special needs of the makers."

¹ New York Times, Aug. 14, 1931, p. 9.

Report on Unemployment-Benefit Plans and Insurance Systems

A REPORT entitled "Unemployment-benefit plans in the United States and unemployment insurance in foreign countries" has been issued as Bulletin No. 544 by the United States Bureau of Labor Statistics. The bulletin was prepared in response to many requests for a review of such systems, and, it is believed, covers practically all plans of importance in the United States, although, owing to time limitations, the survey could not reach all employers and trade-unions in the country.

The first part of the report deals with the plans in existence in the United States, the basic information for the report being obtained in April, 1931, by bureau agents directly from the companies and unions concerned. There have been several official and unofficial reports issued on this subject, but most of the information on the operation of these systems related to periods prior to the industrial depression which began in the latter part of 1929. In addition to completing and verifying existing information as to the details of the plans, therefore, and studying the plans recently established, an effort was made to ascertain what effects the depressed industrial conditions have had on the operation of the plans. It was found that 79 unemployment-benefit or employment-guaranty plans were in existence, and that the number of employees potentially affected by these plans was about 226,000, although, owing to varying service requirements, the number actually eligible to benefit was considerably less than this number. Of the 79 plans, 15 were company plans established by employers, either individually or in groups, 16 were joint plans established by agreement between trade-unions and employers, and 48 were trade-union plans maintained solely by labor organizations, either national or local, for the benefit of their own members.

The second part of the report deals with the public unemployment-insurance systems in the 18 countries which, according to the bureau's information, had adopted such systems up to May, 1931. The reports were prepared by the consular representatives of the United States Department of State in the countries concerned, in accordance with an outline prepared by the Bureau of Labor Statistics.

Although unemployment insurance has been established by legislation in 18 foreign countries, in two of these—Luxemburg and Spain—the legislation has not yet been put in effect, but in the other 16 countries the unemployment insurance systems are in active operation. The systems established in these countries fall into two main groups classified as "compulsory" and "voluntary." In 9 countries the legislation is compulsory in character and in 8 voluntary, while in 1 country—Switzerland—the cantonal legislation is in some cases compulsory and in others voluntary. The reports for the different countries contain, as far as information is available, an analysis of the law, a statement of the attitude of representative individuals and organizations toward the system, and a statement as to any important changes under consideration at the time the report was prepared.

The entire report, for both the United States and foreign countries, is intended to be entirely objective in character. No attempt, there-

fore, has been made to evaluate the merits or success of any plan, except that in the case of foreign countries the opinions of competent authorities on this point, which represent various points of view, are presented as far as such opinions were obtainable.

Unemployment, April, 1930, by Industry Groups, Age, Reasons for Idleness, and Family Relationship

ANALYSES of the returns from the Federal unemployment census of April, 1930, by industry groups, age, reasons for idleness, and family relationship, have recently been published by the United States Bureau of the Census and are reproduced below. The unemployment inquiry, which was made as a part of the population census, covered all persons usually working at a gainful occupation who were not at work on the day preceding the enumeration.

The total number of gainful workers (persons 10 years old and over reporting a gainful occupation) in the United States in April, 1930, was 48,832,589, comprising 38,053,795 males and 10,778,794 females. Of these, 2,429,062, or 5.0 per cent, were returned as out of a job, able to work, and looking for a job (class A). Of the male gainful workers, 2,058,738, or 5.4 per cent, were returned as jobless (class A), while of the female gainful workers 370,324, or 3.4 per cent, were jobless.

The highest unemployment percentages were found in manufacturing and mechanical industries, extraction of minerals, and forestry and fishing, and the lowest in agriculture, public service, and professional service. In the detailed list of industry groups, 15.4 per cent of the workers in the building industry were jobless. Other high percentages in this class were 10.2 in woolen and worsted mills, 9.9 in automobile factories, and 9.0 in cigar and tobacco factories. Among manufacturing and mechanical industry groups, the smallest percentages of jobless were found in chemical and allied industries, 3.9 per cent; paper and allied industries, 3.9 per cent; and independent hand trades, 2.9 per cent. In agriculture the most significant unemployment returns are those for "farm laborers—wage workers." In this group, 3.8 per cent were returned as jobless (class A).

In class B (persons having jobs but on lay-off without pay, excluding those sick or voluntarily idle), the highest unemployment percentages were 12.6 in coal mines, and 11.2 in woolen and worsted mills. In these industries, many persons, even those with long periods of idleness, reported themselves as having jobs, while in other industries, such as bakeries, printing, and independent hand trades, very few persons returned on the unemployment schedules were reported as having jobs to which they expected to return.

The returns for class A are shown in Table 1 by main industry groups, by sex, together with the number of gainful workers in each group. In Table 2, unemployment classes A and B are shown by sex, with the number of gainful workers for a more extended list of industry groups.

TABLE 1.—UNEMPLOYMENT RETURNS FOR CLASS A, AND NUMBER OF GAINFUL WORKERS, BY MAIN INDUSTRY GROUPS, 1930

Industry group	Gainful workers			Class A: Persons out of a job, able to work, and looking for a job		
	Males	Females	Total	Males	Females	Total
Agriculture.....	9,568,347	913,976	10,482,323	105,536	5,632	111,168
Forestry and fishing.....	266,876	3,249	270,125	19,627	221	19,848
Extraction of minerals.....	1,147,770	10,294	1,158,064	90,460	298	90,758
Manufacturing and mechanical industries.....	11,901,247	2,416,288	14,317,535	1,013,772	108,838	1,122,610
Transportation.....	3,990,875	447,730	4,438,605	199,220	8,608	207,828
Trade.....	5,820,642	1,716,384	7,537,026	195,757	55,712	251,469
Public service (not elsewhere classified).....	934,581	123,323	1,057,904	21,841	1,458	23,299
Professional service.....	1,663,049	1,762,795	3,425,844	42,285	33,043	75,328
Domestic and personal service.....	1,662,707	3,149,391	4,812,098	88,254	122,178	210,432
Industry not specified.....	1,097,701	235,364	1,333,065	281,986	34,336	316,322
All industries.....	38,053,795	10,778,794	48,832,589	2,058,738	370,324	2,429,062

TABLE 2.—UNEMPLOYMENT RETURNS FOR CLASSES A AND B, AND NUMBER OF GAINFUL WORKERS, BY DETAILED INDUSTRY GROUPS, 1930

Industry group	Gainful workers		Class A: Persons out of a job, able to work, and looking for a job		Class B: Persons having jobs but on lay-off without pay, excluding those sick or voluntarily idle	
	Males	Females	Males	Females	Males	Females
Agriculture:						
Farmers (owners and tenants).....	5,760,050	257,672	6,799	81	2,452	71
Farm laborers—Wage workers.....	2,555,935	171,100	97,817	5,484	23,805	5,480
Unpaid family workers.....	1,171,687	6,238				
Other occupations in agriculture.....	80,675	478,966	920	67	298	43
Total.....	9,568,347	913,976	105,536	5,632	26,555	5,594
Forestry and fishing:						
Forestry.....	193,433	2,518	17,291	166	5,298	56
Fishing.....	73,443	731	2,336	55	2,994	21
Total.....	266,876	3,249	19,627	221	8,292	77
Extraction of minerals:						
Coal mines.....	688,660	2,847	52,175	95	87,306	98
Oil and gas wells.....	195,006	3,949	17,496	110	3,737	12
Other mines and quarries.....	264,104	3,498	20,789	93	7,510	71
Total.....	1,147,770	10,294	90,460	298	98,553	181
Manufacturing and mechanical industries:						
Building industry.....	2,526,094	35,447	393,503	1,587	91,489	363
Chemical and allied industries.....	534,672	86,378	21,868	2,364	5,267	761
Cigar and tobacco factories.....	71,024	78,628	7,290	6,217	2,106	3,093
Clay, glass, and stone industries.....	341,407	30,766	24,033	1,080	13,099	1,077
Clothing industries.....	375,386	413,925	28,325	17,727	11,835	13,686
Bakeries.....	241,645	40,460	14,257	1,167	2,194	383
Slaughter and packing houses.....	143,725	20,658	8,172	901	1,629	397
Other food and allied industries.....	352,797	107,619	17,547	7,141	5,836	3,761
Automobile factories.....	594,889	45,272	61,182	2,342	19,727	1,119
Automobile repair shops.....	253,769	3,977	17,125	145	2,736	25
Blast furnaces and steel rolling mills.....	605,242	21,811	36,166	759	24,947	340
Other iron and steel industries.....	1,648,523	109,430	113,664	3,522	42,494	1,703
Metal industries, except iron and steel.....	276,531	55,259	19,170	2,656	7,887	1,648
Shoe factories.....	172,083	99,246	12,499	3,660	7,704	4,707
Other leather industries.....	87,347	15,395	6,539	917	2,601	500
Saw and planing mills.....	444,160	10,081	20,936	349	12,730	235
Other woodworking industries.....	369,350	36,345	30,822	1,524	15,199	1,125

TABLE 2.—UNEMPLOYMENT RETURNS FOR CLASSES A AND B, AND NUMBER OF GAINFUL WORKERS, BY DETAILED INDUSTRY GROUPS, 1930—Continued

Industry group	Gainful workers		Class A: Persons out of a job, able to work, and looking for a job		Class B: Persons having jobs but on lay-off without pay, excluding those sick or voluntarily idle	
	Males	Females	Males	Females	Males	Females
Manufacturing and mechanical industries—Continued.						
Printing, publishing, and engraving.....	427, 187	114, 574	18, 009	3, 826	3, 698	1, 187
Paper and allied industries.....	191, 843	51, 478	7, 834	1, 688	2, 875	1, 100
Cotton mills.....	261, 914	160, 487	15, 987	7, 386	12, 597	10, 069
Knitting mills.....	72, 476	101, 552	4, 754	4, 230	2, 996	5, 061
Silk mills.....	90, 545	85, 344	5, 945	3, 442	3, 091	3, 596
Woolen and worsted mills.....	89, 809	50, 110	10, 177	4, 079	8, 758	6, 923
Other textile mills.....	176, 602	98, 592	11, 882	4, 218	6, 730	4, 025
Independent hand trades.....	160, 946	200, 032	4, 658	5, 641	1, 047	1, 865
Electrical machinery and supply factories.....	295, 834	82, 680	22, 953	7, 405	5, 483	2, 455
Rubber factories.....	130, 762	35, 669	10, 253	1, 565	2, 242	700
Other manufacturing industries.....	964, 685	225, 073	68, 222	11, 300	17, 480	4, 361
Total.....	11, 901, 247	2, 416, 288	1, 013, 772	108, 838	336, 477	76, 265
Transportation:						
Construction and maintenance of streets, etc.	448, 706	4, 241	38, 404	135	14, 566	44
Garages, greasing stations, etc.	408, 934	15, 041	20, 782	372	3, 306	47
Postal service.....	254, 238	29, 825	1, 591	143	677	109
Steam railroads.....	1, 526, 631	56, 715	62, 115	1, 176	30, 662	312
Street railroads.....	189, 010	6, 800	6, 044	102	1, 330	12
Telegraph and telephone.....	267, 079	311, 284	8, 390	6, 027	2, 115	1, 166
Other transportation and communication.....	896, 277	23, 824	61, 894	653	20, 371	208
Total.....	3, 990, 875	447, 730	199, 220	8, 608	73, 027	1, 898
Trade:						
Banking and brokerage.....	459, 120	165, 841	10, 508	3, 168	1, 004	289
Insurance and real estate.....	564, 381	233, 904	10, 362	5, 266	1, 408	578
Automobile agencies and filling stations.....	472, 120	33, 202	13, 879	895	1, 833	99
Wholesale and retail trade, except automobiles.....	4, 121, 685	1, 227, 747	152, 214	44, 363	26, 030	9, 576
Other trade industries.....	203, 336	55, 690	8, 794	2, 020	1, 949	418
Total.....	5, 820, 642	1, 716, 384	195, 757	55, 712	32, 224	10, 960
Public service (not elsewhere classified).....	934, 581	123, 323	21, 841	1, 458	5, 960	414
Professional service:						
Recreation and amusement.....	318, 007	131, 026	23, 225	6, 503	5, 415	1, 481
Other professional and semiprofessional service.....	1, 345, 042	1, 631, 769	19, 060	26, 540	3, 684	8, 386
Total.....	1, 663, 049	1, 762, 795	42, 285	33, 043	9, 099	9, 867
Domestic and personal service:						
Hotels, restaurants, boarding houses, etc.	692, 166	660, 296	46, 032	26, 324	5, 032	4, 458
Laundries and cleaning and pressing shops.....	213, 042	206, 048	8, 237	6, 993	1, 241	1, 698
Other domestic and personal service.....	757, 499	2, 283, 047	33, 985	88, 861	5, 226	16, 825
Total.....	1, 662, 707	3, 149, 391	88, 254	122, 178	11, 499	22, 981
Industry not specified.....	1, 097, 701	235, 364	281, 986	34, 336	25, 721	2, 941
All industries.....	38, 053, 795	10, 778, 794	2, 058, 738	370, 324	627, 407	131, 178

Unemployment by Age Groups

IN THE returns of the unemployment census the most significant group, designated as class A, is made up of persons out of a job, able to work, and looking for a job. In this group there were 2,429,062 persons, comprising 2,058,738 males and 370,324 females. In class A the median age was 34.9 years. For males, in class A, the median

age was 36.3, and for females, 27.6. Of the total number in this class 25 per cent were under the age of 24 years, and 25 per cent over 48.

In class B (persons having jobs but on lay-off without pay, excluding those sick or voluntarily idle) there were 758,585 persons, comprising 627,407 males and 131,178 females. In class B the median age was 35.1 years. For males, in class B, the median age was 36.4 years and for females 28.1. Of the total number in this class, 25 per cent were under the age of 24, and 25 per cent over 47.

The following table summarizes the returns for the United States in classes A and B, by sex and age groups, with per cent of distribution in each class and sex:

TABLE 3.—NUMBER AND PER CENT OF UNEMPLOYED, BY AGE GROUPS

Age group	Number			Class B: Persons having jobs but on lay-off without pay, excluding those sick or voluntarily idle		
	Class A: Persons out of a job, able to work and looking for a job			Males	Females	Total
	Males	Females	Total			
10 to 14 years.....	1,520	939	2,459	889	764	1,653
15 to 19 years.....	192,176	75,070	267,246	50,097	26,717	76,814
20 to 24 years.....	331,428	83,255	414,683	92,174	27,645	119,819
25 to 29 years.....	243,397	50,504	293,901	80,012	17,042	97,054
30 to 34 years.....	203,800	35,327	239,127	69,804	12,826	82,630
35 to 39 years.....	211,265	33,479	244,744	72,645	12,609	85,254
40 to 44 years.....	197,425	25,960	223,385	66,454	10,388	76,842
45 to 49 years.....	188,078	22,232	210,310	59,427	8,216	67,643
50 to 54 years.....	162,589	17,114	179,703	48,167	6,193	54,360
55 to 59 years.....	129,096	12,057	141,153	35,920	4,031	39,951
60 to 64 years.....	97,042	7,740	104,782	25,565	2,544	28,109
65 to 69 years.....	62,226	4,259	66,485	15,752	1,416	17,168
70 years and over.....	37,171	2,117	39,288	10,162	712	10,874
Unknown.....	1,525	271	1,796	339	75	414
Total.....	2,058,738	370,324	2,429,062	627,407	131,178	758,585

Per cent						
10 to 14 years.....	0.1	0.3	0.1	0.1	0.6	0.2
15 to 19 years.....	9.3	20.3	11.0	8.0	20.4	10.1
20 to 24 years.....	16.1	22.5	17.1	14.7	21.1	15.8
25 to 29 years.....	11.8	13.6	12.1	12.8	13.0	12.8
30 to 34 years.....	9.9	9.5	9.8	11.1	9.8	10.9
35 to 39 years.....	10.3	9.0	10.1	11.6	9.6	11.2
40 to 44 years.....	9.6	7.0	9.2	10.6	7.9	10.1
45 to 49 years.....	9.1	6.0	8.7	9.5	6.3	8.9
50 to 54 years.....	7.9	4.6	7.4	7.7	4.7	7.2
55 to 59 years.....	6.3	3.3	5.8	5.7	3.1	5.3
60 to 64 years.....	4.7	2.1	4.3	4.1	1.9	3.7
65 to 69 years.....	3.0	1.2	2.7	2.5	1.1	2.3
70 years and over.....	1.8	.6	1.6	1.6	.5	1.4
Unknown.....	.1	.1	.1	.1	.1	.1
Total.....	100.0	100.0	100.0	100.0	100.0	100.0

Unemployment, by Reason for Idleness and Family Relationship

IN THE returns of the unemployment census the most significant group, designated as class A, is made up of persons out of a job, able to work, and looking for a job. In this group there were 2,429,062 persons, comprising 2,058,738 males and 370,324 females. Of these, 919,151, or 37.8 per cent, gave immediate or superficial reasons for

idleness, such as "Laid off," "No work," etc.; 716,168, or 29.5 per cent, gave economic reasons, such as "plant closed," "lack of orders," etc., and 367,510, or 15.1 per cent, gave reasons indicating seasonality, chiefly "off season."

In class B (persons having jobs but on lay-off without pay, excluding those sick or voluntarily idle), there were 758,585 persons, comprising 627,407 males and 131,178 females. In this group, 289,311, or 38.1 per cent, gave economic reasons, which in this class included "plant on part time." Immediate or superficial reasons were given by 267,957 persons, and seasonality (off season) by 116,917.

Of the other groups of reasons, voluntary absence and personal disability appear in class A only. By definition, these reasons are excluded from class B. Reasons indicating dissatisfaction, as "pay too low," "resigned," etc., and of industrial policy, such as "reduction of force," "machines introduced," etc., were naturally more important in class A than in class B, while family reasons and weather conditions appear more prominently in class B than in class A.

Of the returns in class A, 47.7 per cent of the males and 9.8 per cent of the females were returned as heads of families, while in class B, 59.1 per cent of the males and 9.4 per cent of the females were family heads. The other returns represented persons who were either related members of families or lodgers, boarders, or members of one person or of "partnership" families.

The following table summarizes the returns for the United States in classes A and B, by sex and by reason for idleness, and family relationship:

TABLE 4.—REASONS FOR IDLENESS, AND FAMILY RELATIONSHIP, OF UNEMPLOYED

Subject	Class A: Persons out of a job, able to work, and looking for a job			Class B: Persons having jobs but on lay-off without pay, excluding those sick or voluntarily idle		
	Males	Females	Total	Males	Females	Total
Reason for idleness:						
Voluntary absence.....	30,262	12,612	42,874			
Personal disability.....	101,177	37,096	138,273			
Family reasons.....	4,869	5,834	10,703	9,935	8,709	18,644
Weather conditions.....	4,074	128	4,202	26,668	1,109	27,777
Breakdown of plant or equipment.....	3,746	679	4,425	7,737	1,022	8,759
Seasonality (off season).....	324,176	43,334	367,510	97,369	19,548	116,917
Economic conditions.....	619,792	96,376	716,168	238,625	50,686	289,311
Industrial policy.....	87,354	14,816	102,170	9,603	1,800	11,403
Labor disputes.....	7,774	1,026	8,800	5,868	637	6,505
Immediate or superficial reasons.....	787,257	131,894	919,151	222,295	45,662	267,957
Dissatisfaction.....	73,248	23,672	96,920	3,942	853	4,795
Miscellaneous.....	4,618	525	5,143	1,229	133	1,362
Reason not reported.....	10,391	2,332	12,723	4,136	1,019	5,155
Total.....	2,058,738	370,324	2,429,062	627,407	131,178	758,585
Family relationship:						
Head of family.....	981,591	36,322	1,017,913	370,919	12,326	383,245
Related member of family.....	703,414	257,814	961,228	178,226	102,225	280,451
Lodger, etc.....	373,733	76,188	449,921	78,262	16,627	94,889
Total.....	2,058,738	370,324	2,429,062	627,407	131,178	758,585

Unemployment-Benefit Plan for Pocketbook Workers

BY JOINT agreement of June 13, 1931, an unemployment-benefit plan was set up for pocketbook workers in the New York market.¹ Signatories to the agreement were the Industrial Council of Leather Goods Manufacturers (Inc.) and the International Pocketbook Workers' Union. Beginning in 1930 and throughout the early months of 1931 the union maintained a trade-union plan of unemployment benefits. However, this plan was discontinued shortly before the agreement providing the joint plan was established.

Outline of Plan

THE plan is to go into effect at once, provision having been made that contributions to the unemployment fund should begin one week after the signing of the agreement.

Terms of benefit.—The agreement states that benefit payments shall be made to workers as soon after the setting up of the plan as the trustees and the administrator of the fund shall have worked out a plan of operation. As yet no information is available showing terms of eligibility, waiting period before making payments, amount and duration of benefits.

Administration.—It is provided that administration of the plan shall be placed in the hands of three trustees representing the union, three representing the employers, and an administrator chosen at the time that the agreement was signed and acceptable to both parties. It is further stipulated that the unemployment insurance fund shall be administered by an unemployment insurance bureau to be set up at once. All contributions to the fund are to be paid into the unemployment insurance bureau weekly. Should there be a dispute in the industry at the expiration of the present agreement, funds then in the hands of the unemployment insurance bureau must be held until the dispute is settled.

Method of financing plan.—The cost of the plan will be borne equally by employers and union members. Employers will pay into the benefit fund 2½ per cent of the weekly pay roll of all union members in their shops, and workers will contribute 2½ per cent of their weekly earnings. No statement is available as yet as to whether a reserve fund will be set aside.

Extent of Normal Employment in Cleveland Manufacturing Plants

THE extent of normal employment among 600 manufacturing establishments in the Cleveland area is shown in the following table summarizing information obtained by the Cleveland Chamber of Commerce as the result of a questionnaire sent to manufacturers in June, 1931. The table classifies the several firms according to the hours worked per week and the percentage of normal employment.

¹ The International Pocketbook Worker, May-June-July, 1931, p. 7.

CLASSIFICATION OF 600 CLEVELAND MANUFACTURING PLANTS ACCORDING TO WEEKLY HOURS WORKED AND PERCENTAGE OF NORMAL FORCE

Time worked per week	Number of firms with specified per cent of normal force							Total
	Under 20 per cent	20 and under 40 per cent	40 and under 60 per cent	60 and under 80 per cent	80 and under 100 per cent	100 per cent	Over 100 per cent	
14 hours.....		1						1
15 hours.....			1					1
16 hours.....			1	1				2
17 hours.....			1					1
18 hours.....	1							1
20 hours.....		2	2	2		1		7
21 hours.....			1					1
23 hours.....	1							1
24 hours.....	3	4	5	9	1	2		24
25 hours.....		2	2	1				5
26 hours.....			1	1	1			3
27 hours.....		3	2	5	1	2		13
28 hours.....		1	4	6				11
29 hours.....			2		1			3
30 hours.....			4					4
32 hours.....		5	8	7	1	3		24
33 hours.....			2	2				4
34 hours.....			1	2	2			5
35 hours.....		2	3	8	7	1		21
36 hours.....			2	7	1	2		12
37 hours.....			1	1				2
38 hours.....	1	3	4	1	1	2		12
39 hours.....		1		1	2			4
40 hours.....	6	18	20	9	13	7	1	77
41 hours.....			2	1	2	4		9
42 hours.....			2	1				3
43 hours.....			3	2	3	1		9
44 hours.....		2	14	13	10	18	3	53
45 hours.....	7	7	9	13	4	4	1	50
46 hours.....			2	1				3
47 hours.....			3	6	9	4		22
48 hours.....	1	3	2	6	4	9	3	28
50 hours.....	2	8	15	30	13	34	7	112
51 hours.....					2			2
52 hours.....	1		2	3	2	1	1	10
53 hours.....				5		1		6
54 hours.....		1	5	3	4	3		16
55 hours.....		2	1	1	2			6
56 hours.....				1		1		2
57 hours.....					1	1		2
58 hours.....					1			1
60 hours.....			1	3	3	5		12
63 hours.....			1		1			2
70 hours.....						1		1
74 hours.....			1					1
84 hours.....						1		1
Total number of firms.....	23	65	130	160	98	108	16	600

Relative Importance of Male and Female Workers in Cleveland and Cuyahoga County, Ohio, 1923 and 1928

IN A recent survey of fluctuations in employment in Cleveland and Cuyahoga County,¹ some changes in the sex composition of the gainfully employed population as between 1923 and 1928 are brought out. Grouping the employed population of the county by sex, under five major industry heads, it is shown that between 1923 and 1928 the number of employed women increased more than did the number of men and that, in all industries except one, women represented a higher percentage of the total number employed in 1928 than in 1923. The table following shows the number of men and women in each industry for the two years mentioned and the per cent of the total that each sex formed in each industry.

¹ Wooster, Harvey A., and Whiting, Theodore E.: Fluctuation in Employment in Cleveland and Cuyahoga County, 1923-1928. Ann Arbor, Mich., Edwards Bros. [1931?].

RELATIVE IMPORTANCE OF EACH SEX, BY INDUSTRY GROUPS, 1923 AND 1928

Industry group	Number of persons in average month				Per cent of total			
	1923		1928		1923		1928	
	Male	Female	Male	Female	Male	Female	Male	Female
Manufactures.....	132,544	31,627	130,137	33,547	80.7	19.3	79.5	20.5
Trade, retail and wholesale.....	19,610	10,788	19,768	14,879	64.5	35.5	57.1	42.9
Service.....	13,287	10,214	22,781	18,074	56.5	43.5	55.8	44.2
Transportation and public utilities.....	12,974	3,953	16,139	4,865	76.6	23.4	76.8	23.2
Construction.....	15,198	405	14,973	576	97.4	2.6	96.3	3.7
Miscellaneous ¹	591	4,654	808	86	11.3	88.7	90.4	9.6
All industries.....	194,204	61,641	204,606	72,027	75.9	24.1	74.0	26.0

¹ Differences in the miscellaneous group are largely accounted for by a change in method of classification that was introduced in 1925.

Between the years 1923 and 1928 the number of men engaged in manufactures and construction declined by 1.8 and 1.5 per cent, respectively, while the number of women in these two branches of industry increased by 6.1 and 42.2 per cent, respectively. However, the volume of employment for women in these industries is far below that of men, even taking into consideration the increases shown in the 1928 figures. Employment in the remaining three branches of industry increased for both men and women; in service the increases were 71.5 per cent for men and 77.0 per cent for women; in transportation and public utilities, 24.4 per cent for men and 23.1 per cent for women; and in the remaining industrial classification, trade, retail and wholesale, the increase for women was 37.9 per cent, while the number of men employed remained almost stationary. Taking all industries together the number of men employed increased by 5.4 per cent in the county and women by 16.8 per cent.

In discussing the results of their investigation the authors of this study point out that if the number of men employed had increased in proportion to the increase in the male portion of the population, this number should have grown by 26,000, at a conservative estimate, instead of increasing by only 10,402, as shown in the table. Attention is also directed to the trend of women into industry that is evidenced by an increase of from 61,641 women in the industries of Cleveland and Cuyahoga County in 1923 to 72,027 in 1928.

Unemployment Emergency Plan in Hamilton, Ohio

AN ACCOUNT of the plan for providing employment for the citizens of the city, which was adopted in Hamilton, Ohio, as a result of the business depression, is given by John K. Northway in Nation's Business, July, 1931, under the title "They sold no apples in Hamilton."

When the depression began to be felt seriously in that city in the fall of 1930, certain employers and employees, city officials, and social workers were called together by the directors of the city chamber of commerce to devise some plan by which serious unemployment could be checked and a certain amount of work could be furnished to every

one who was able and willing to work. The plan which was evolved depended upon city-wide cooperation and proved so successful that it has not been necessary to resort to street vending, bread lines, or similar provisions to assist persons thrown out of regular employment.

Hamilton is a manufacturing town of about 53,000 population. Its products are diversified, consisting largely of staples such as paper, stoves, safes, and machinery, so that the different industries were not affected by the depression all at the same time. As the population of the town is mainly made up of factory employees, the stock-market collapse had little effect on the people as a whole and a building boom helped to delay serious unemployment, so that it was not until the late spring and summer of 1930 that the town began really to feel the depression, and even then the situation did not become serious until late in the fall.

A citizens' unemployment committee was organized at the first meeting called by the chamber of commerce and a plan was drawn up which was presented at a meeting of all employers of the city and immediately adopted by them. The plan provided that, in apportioning work, preference should be given to residents of the city and that only such outside labor should be employed as was not available within the city. Preference was also to be given, all other things being equal, to persons with dependents, and the plan provided that only those married women should be employed who had no other means of support. Rotation of employment in order to give work to the maximum number possible was also planned. A clearing house for employment in which all persons deserving work should be listed was to be maintained by the city, the bureau for social work, and other agencies. The plan as outlined, therefore, was designed to take care of all persons who were employed or might be employed by the factories, and it cut off opportunity for persons to drift in from other cities and take jobs away from the citizens of the town.

The next step taken by the committee was to take care of those employees who had been laid off by the factories and could not find employment. It was announced by the city manager that all city employees had agreed to contribute 2.5 per cent of their wages each month to an unemployment fund, and this action was followed by similar voluntary contributions from business houses and other organizations, so that in a short time \$10,000 per month was being paid into the fund. The money thus raised was used to provide work for unemployed workers who would otherwise have been subjects for charity. The work was apportioned on the basis of the individual's responsibilities, a man having a large family being given more days' work per week than one with fewer responsibilities. Each case was investigated and as far as was humanly possible every deserving person was provided for. The emergency work was paid for at the rate of 37.5 cents per hour or \$3 per day, and at the end of each day's work the workers were given slips showing the number of hours worked and the amount of wages due. The pay rolls were made up twice each week.

The work provided was all useful and necessary, most of it being clean-up and repair work about the city. The bed of an old abandoned canal was cleared of debris and filled, and parks, alleys, and streets were cleaned and repaired. Timber which was cut off the

roadbed of a new boulevard was cut up and sold to citizens, orders being placed through the chamber of commerce. Some men were placed with the regular city repair and maintenance gangs, and needy women were employed in cleaning the schools.

While the employment program provided for the necessities of food and shelter, it did not provide sufficient funds for clothing, and in providing for this need it was impossible to get away from charity altogether, but the work of collection, cleaning, and repair of donated clothing, together with its distribution, was handled systematically and efficiently. At first the work was in the hands of the boy and girl scouts, but it became too much for them to handle, and it was finally turned over to a group of women, city trucks being used to collect the clothing from the various firehouses where it was left by the donors.

The records show that in slightly more than five months from November 24, to May 2, 8,274 men and 583 women had been given work, the men working a total of 127,533 hours and the women 10,034. As nearly as could be ascertained, the individuals given employment numbered 1,622 men and 183 women, all of whom were heads of families. The pay roll for the period totaled \$51,963.24. On the basis of five to a family, about 9,000, it is estimated, were aided by the city program.

The city manager of Hamilton has summed up the experience under the cooperative community plan as follows:

The Hamilton plan has given every man in the city who deserves it a chance to earn money by honest labor, to provide for himself and dependents * * *. It has provided only for Hamiltonians, and has kept out of the city all undesirables or unemployed from other places. It has all been done through voluntary contributions, without applying pressure of any kind.

Furthermore, most of our contributions have come from those interested in the welfare of their own class, the employees and employed of the city, with the latter bearing the greater part of the burden.

No one has been forced to beg food from his fellow citizens. Despite increased unemployment, there has been no increase in crime or in social unrest, but rather a lowering and steadying influence. There has been no increase in sickness or suffering, and no acute disasters as a result of the near crisis.

People everywhere are the same. What has been found adoptable and workable here should be entirely feasible in other cities. The people of Hamilton have responded from their hearts to avert what might have been a disastrous period, and we are all proud of what we have done. We have seen a situation coming and prevented it; we have met an enemy and made it a friend.

Unemployment in Foreign Countries

THE following table gives detailed monthly statistics of unemployment in foreign countries, as shown in official reports, from January, 1930, to the latest available date.

STATEMENT OF UNEMPLOYMENT IN FOREIGN COUNTRIES¹

Date (end of month)	Australia		Austria	Belgium				Canada	
	Trade-unionists unemployed		Compulsory insurance, number unemployed in receipt of benefit	Unemployment insurance societies				Trade-unionists unemployed	
	Number	Per cent		Wholly unemployed		Partially unemployed		Number	Per cent
				Number	Per cent	Number	Per cent		
1930									
January	(2)		273, 197	22, 542	3. 5	25, 782	4. 0	22, 795	10. 8
February	(2)		284, 543	16, 085	2. 6	31, 222	4. 9	24, 175	11. 5
March	63, 144	14. 6	239, 094	14, 030	2. 2	28, 469	4. 5	22, 912	10. 8
April	(2)		192, 477	13, 715	2. 2	36, 605	5. 8	18, 581	9. 0
May	(2)		162, 678	12, 119	1. 9	38, 761	6. 1	20, 424	10. 3
June	80, 595	18. 5	150, 075	12, 226	1. 9	41, 336	6. 5	21, 380	10. 6
July	(2)		153, 188	15, 362	2. 4	48, 580	7. 7	18, 473	9. 2
August	(2)		156, 145	17, 747	2. 8	51, 649	8. 2	³ 18, 232	9. 3
September	90, 379	20. 5	163, 894	23, 693	3. 8	61, 623	9. 9	³ 19, 356	9. 4
October	(2)		192, 778	27, 322	4. 3	54, 804	8. 5	³ 22, 403	10. 8
November	(2)		237, 745	38, 973	6. 1	76, 043	12. 0	³ 28, 408	13. 8
December	104, 951	23. 4	294, 845	63, 585	9. 3	117, 167	17. 0	³ 37, 339	17. 0
1931									
January	(2)		331, 239	77, 181	11. 1	112, 734	16. 2	³ 33, 664	16. 0
February	(2)		334, 041	81, 750	11. 7	121, 906	19. 4	³ 31, 617	15. 6
March	113, 614	25. 8	304, 084	81, 305	11. 3	125, 972	17. 7	³ 32, 300	15. 5
April	(2)		246, 845	70, 377	10. 0	110, 139	15. 6	³ 30, 778	14. 9
May	(2)		208, 852	56, 250	7. 9	97, 755	13. 8	³ 32, 086	16. 2
June	(2)		191, 150	62, 642	8. 9	101, 616	14. 4	³ 32, 682	16. 3
July	(2)		194, 364						

Date (end of month)	Czechoslovakia		Danzig (Free City of)	Denmark		Estonia	Finland	France	Germany
	Trade-union insurance funds—unemployed in receipt of benefit		Number of unemployed registered	Trade-union unemployment funds—unemployed		Number unemployed remaining on live register	Number of unemployed registered	Number of unemployed in receipt of benefit	Number of unemployed registered
	Number	Per cent		Number	Per cent				
1930									
January	39, 199	3. 6	19, 282	55, 876	20. 3	5, 608	12, 696	1, 484	3, 217, 608
February	40, 550	3. 6	21, 153	59, 363	21. 0	4, 580	11, 545	1, 683	3, 365, 811
March	45, 567	4. 0	20, 376	47, 109	15. 6	3, 575	10, 062	1, 630	3, 040, 797
April	42, 664	3. 7	18, 371	33, 471	11. 8	2, 227	7, 274	1, 203	2, 786, 912
May	41, 098	3. 8	16, 232	27, 966	9. 4	2, 065	4, 666	859	2, 634, 718
June	37, 853	3. 4	14, 975	24, 807	8. 7	910	3, 553	1, 019	2, 640, 681
July	46, 800	4. 1	15, 330	26, 200	9. 3	762	4, 026	856	2, 765, 258
August	52, 694	4. 7	15, 687	26, 232	9. 0	1, 039	5, 288	964	2, 883, 000
September	57, 542	5. 3	16, 073	27, 700	9. 0	1, 414	7, 157	988	3, 004, 000
October	61, 213	5. 5	17, 307	32, 880	11. 4	3, 282	10, 279	1, 663	3, 252, 000
November	65, 904	5. 9	20, 272	44, 200	15. 3	5, 675	10, 740	4, 893	3, 683, 000
December	93, 476	8. 3	24, 429	71, 100	24. 6	6, 163	9, 336	11, 952	4, 384, 000
1931									
January	104, 580	9. 5	27, 081	70, 961	24. 4	5, 364	11, 706	28, 536	4, 887, 000
February	117, 450	10. 0	28, 192	73, 427	25. 6	4, 070	11, 557	40, 766	4, 972, 000
March	119, 350	10. 0	27, 070	67, 725	23. 6	2, 765	11, 491	50, 815	4, 756, 000
April	107, 238	8. 9	24, 186	45, 698	15. 9	2, 424	12, 663	49, 958	4, 358, 000
May	93, 941	7. 6	20, 686	37, 856	13. 1	1, 368	7, 342	41, 339	4, 053, 000
June			19, 855	34, 030	11. 6	931	6, 320	36, 237	3, 954, 000
July			20, 420	36, 369	12. 4			35, 916	3, 976, 000

See footnotes at end of table.

STATEMENT OF UNEMPLOYMENT IN FOREIGN COUNTRIES—Continued

Date (end of month)	Germany					Great Britain and Northern Ireland			
	Trade-unionists					Compulsory insurance			
	Wholly unem- ployed		Partially unem- ployed		Number unem- ployed in receipt of benefit	Wholly unem- ployed		Temporary stop- pages	
	Number	Per cent	Num- ber	Per cent		Number	Per cent	Number	Per cent
1930									
January	1,004,787	22.0	501,950	11.0	2,482,648	1,183,974	9.8	336,474	2.8
February	1,076,441	23.5	593,380	13.0	2,655,723	1,211,262	10.0	371,840	3.1
March	995,972	21.7	576,153	12.6	2,347,102	1,284,231	10.6	409,785	3.4
April	926,831	20.3	553,098	12.1	2,081,068	1,309,014	10.8	451,506	3.8
May	895,542	19.5	552,318	12.0	1,889,240	1,339,595	11.1	516,303	4.3
June	896,465	19.6	578,116	12.6	1,834,662	1,341,818	11.1	569,931	4.7
July	930,777	20.5	631,903	13.9	1,900,961	1,405,981	11.6	664,107	5.5
August	984,384	21.7	670,466	14.8	1,947,811	1,500,990	12.4	618,658	5.1
September	1,011,820	22.5	677,627	15.1	1,965,348	1,579,708	13.1	608,692	5.0
October	1,061,570	23.6	693,379	15.4	2,071,730	1,725,731	13.9	593,223	4.9
November	1,167,930	26.0	721,658	16.1	2,353,980	1,836,280	14.8	532,518	4.3
December	(2)	31.7	(2)	16.9	2,822,598	1,853,575	14.9	646,205	5.3
1931									
January	(2)	34.2	(2)	19.2	3,364,770	2,044,209	16.5	618,633	5.0
February	(2)	34.5	(2)	19.5	3,496,979	2,073,578	16.7	623,844	5.0
March	(2)	33.6	(2)	18.9	3,240,523	2,052,826	16.5	612,821	5.0
April	(2)	31.2	(2)	18.0	2,789,627	2,027,896	16.3	564,884	4.6
May	(2)	29.9	(2)	17.4	2,507,732	2,019,533	16.3	558,383	4.3
June	(2)	29.7	(2)	17.7	2,353,657	2,037,480	16.4	669,315	5.4
July						2,073,892	16.7	732,583	5.9

Date (end of month)	Great Britain	Hungary			Irish Free State		Italy		Latvia	
	Number of persons registered with employment exchanges	Trade-unionists un- employed			Compulsory insurance—unem- ployed		Number of un- employed regis- tered		Number unem- ployed remain- ing on live register	
		Chris- tian (Buda- pest)	Social-Demo- cratic		Number	Per cent	Wholly unem- ployed	Parti- ally unem- ployed		
			Num- ber	Per cent						
1930										
January	1,491,519	1,161	21,533	14.5	31,592	11.1	466,231	23,185	9,263	
February	1,539,265	1,120	21,309	14.8	(2)		456,628	26,674	8,825	
March	1,677,473	983	21,016	14.6	(2)		385,432	28,026	6,494	
April	1,698,386	906	20,139	13.7	26,027	9.2	372,236	24,305	3,683	
May	1,770,051	875	19,875	13.6	(2)		367,183	22,825	1,421	
June	1,890,575	829	18,960	13.0	(2)		322,291	21,887	779	
July	2,011,467	920	19,081	13.2	23,393	8.2	342,061	24,209	607	
August	2,039,702	847	21,013	14.5	(2)		375,548	24,056	573	
September	2,114,955	874	22,252	16.0	(2)		394,630	22,734	1,470	
October	2,200,413	999	22,914	16.7	20,775	(2)	446,496	19,081	6,088	
November	2,274,338	975	23,333	17.0	22,990	(2)	534,356	22,125	8,698	
December	2,392,738	935	24,648	17.9	25,622	(2)	642,169	21,788	10,022	
1931										
January	2,613,749	953	26,191	19.1	26,167	(2)	722,612	27,924	9,267	
February	2,627,559	965	27,089	19.8	28,681	(2)	765,325	27,110	8,363	
March	2,581,030	996	27,092	(2)	26,825	(2)	707,486	27,545	8,430	
April	2,531,674	1,042	27,129	(2)	25,413	(2)	670,353	28,780	6,380	
May	2,596,431				23,970	(2)	635,183	26,059	1,871	
June	2,629,215				23,016		573,593	24,206		
July	2,662,765									

See footnotes at end of table.

STATEMENT OF UNEMPLOYMENT IN FOREIGN COUNTRIES—Continued

Date (end of month)	Netherlands		New Zealand		Norway		Number unem- ployed re- maining on live register	Poland Number unem- ployed registered with em- ployment offices
	Unemployment insurance socie- ties—unemployed		Trade-unionists unemployed		Trade-unionists (10 unions) unemployed			
	Number	Per cent	Number	Per cent	Number	Per cent		
1930								
January	56,535	13.9	(²)		7,786	19.0	22,549	241,974
February	50,957	12.5	4,348	8.5	7,851	18.9	22,974	274,708
March	34,996	8.6	(²)		7,503	17.8	22,533	289,469
April	28,421	6.9	(²)		6,701	15.8	19,829	271,225
May	26,211	6.3	5,884	10.9	5,239	12.2	16,376	224,914
June	23,678	5.5	(²)		4,700	10.8	13,939	204,982
July	29,075	6.7	(²)		4,723	10.8	11,907	193,687
August	32,755	7.6	7,197	13.5	5,897	13.4	12,923	173,627
September	35,532	8.2	(²)		7,010	15.7	17,053	170,467
October	41,088	9.6	(²)		8,031	18.0	20,363	165,154
November	46,807	11.8	8,119	15.5	9,396	21.4	24,544	209,912
December	72,191	16.5	(²)		11,265	25.5	27,157	299,797
1931								
January	103,728	23.4	(²)		11,692	26.3	28,596	340,718
February	99,753	22.2	(²)		(²)		29,107	358,925
March	80,525	17.7	29,434		11,213	24.9	29,095	372,536
April	^a 68,860	14.3	37,598		(²)		28,477	351,679
May	^b 52,830	12.4	36,921				25,206	320,109
June	^c 56,028	13.1	42,522				22,736	
July	^d 64,863	14.8					20,869	

Date (end of month)	Poland				Rumania Number unem- ployed remaining on live register	Saar Ter- ritory Number unem- ployed registered	Sweden	
	Industrial workers						Trade-unionists unemployed	
	Extractive and manufacturing industries— wholly unem- ployed		Manufacturing industries—par- tially unem- ployed				Number	Per cent
	Number	Per cent	Number	Per cent				
1930								
January	219,333	24.3	108,812	24.8	12,622	11,307	45,636	14.2
February	251,627	27.5	120,058	28.4	15,588	11,949	45,460	13.2
March	265,135	28.7	120,844	28.9	13,045	8,882	42,278	12.5
April	246,670	27.0	113,594	26.9	13,412	7,522	38,347	11.1
May	201,116	23.0	104,469	24.2	25,096	7,362	28,112	8.3
June	182,600	21.6	94,375	22.2	22,960	6,330	28,956	8.1
July	170,665	20.5	70,597	17.0	23,236	7,095	27,170	7.8
August	150,650	18.3	74,289	17.1	24,209	7,099	28,539	8.1
September	146,642	17.8	74,285	16.5	39,110	7,527	34,963	9.8
October	141,422	17.5	91,854	14.8	36,147	9,013	43,927	12.2
November	(²)		106,835	23.6	42,689	12,110	57,070	15.3
December	(²)		95,637	23.1	36,212	15,245	86,042	22.9
1931								
January	(²)		82,717	23.8	38,804	18,921	69,437	19.8
February			92,838	27.1	43,270	20,139	66,923	18.4
March					48,226	18,292	72,944	19.3
April					41,519	18,102	64,534	17.5
May						14,886		
June						15,413		

See footnotes at end of table.

STATEMENT OF UNEMPLOYMENT IN FOREIGN COUNTRIES—Continued

Date (end of month)	Switzerland				Yugo- slavia
	Unemployment funds				
	Wholly unem- ployed		Partially unem- ployed		
	Number	Per cent	Number	Per cent	
1930					
January.....	10,523	4.4	10,710	4.4	8,506
February.....	9,971	4.1	11,445	4.7	9,437
March.....	7,882	2.6	12,642	4.2	9,739
April.....	5,203	2.1	12,755	5.3	12,052
May.....	5,356	2.2	13,129	5.4	8,704
June.....	5,368	1.7	17,688	5.7	6,991
July.....	4,751	1.9	15,112	6.2	7,236
August.....	5,763	2.3	19,441	7.9	6,111
September.....	7,792	2.5	26,111	8.3	5,973
October.....	7,399	3.0	23,369	9.4	6,009
November.....	11,666	4.7	25,793	10.5	7,219
December.....	21,400	6.6	33,483	10.4	9,969
1931					
January.....	20,551	8.3	30,977	12.5	11,903
February.....	20,081	7.9	30,879	12.2	14,424
March.....	18,991	5.4	41,880	12.4	12,029
April.....	10,389	4.0	27,726	10.6	11,391
May.....	9,174	3.5	26,058	9.9	6,929
June.....	12,577	3.6	34,266	9.7	

¹ Sources: League of Nations—Monthly Bulletin of Statistics; International Labor Office—International Labor Review; Canada—Labor Gazette; Great Britain—Ministry of Labor Gazette; Austria—Statistische Nachrichten; Australia—Quarterly Summary of Australian Statistics; Germany—Reichsarbeitsblatt, Reichs Arbeitsmarkt Anzeiger; Switzerland—Wirt. u. Social. Mitteilungen, La Vie Economique; Poland—Wiedomosci Statystyczne; Norway—Statistiske Meddelelser; Netherlands—Maandschrift; Sweden—Sociala Meddelanden; Denmark—Statistiske Efterretninger; Finland—Bank of Finland Monthly Bulletin; France—Bulletin du Marché du Travail; Hungary—Magyar Statisztikai Szemle; Belgium—Revue du Travail; New Zealand—Monthly Abstract of Statistics; U. S. Department of Commerce—Commerce Reports; and U. S. Consular Reports.

² Not reported.

³ Computed by Bureau of Labor Statistics from official report covering membership of unions reporting and per cent of unemployment.

⁴ New series of statistics showing unemployed registered by the employment exchanges. Includes not only workers wholly unemployed, but also those intermittently employed.

⁵ Provisional figure.

Available Supply of Juvenile Labor in England and Wales

VARIATIONS in the birth rate in Great Britain during and immediately after the war are naturally reflected in the number of young persons from 14 to 18 years old available each year for employment. When the Government decided to introduce its bill for raising the age for leaving school from 14 to 15 years, it was apparent that this would place a further limitation on the supply. Accordingly in December, 1929, the Ministry of Labor asked the National Advisory Council for Juvenile Employment to make a study of the prospective demand for and supply of juvenile labor in different parts of the country and to advise as to any measures which might prove helpful in adjusting the two. The council, working through the local committees for juvenile employment, made a study of the probable supply of juvenile labor in relation to the demand for it for each of the years from 1930 to 1938, which has recently been published by the Ministry of Labor.

The defeat of the school bill early in the present year left the age for leaving school unchanged, and thus invalidated many of the calculations involved, but the council feels that the study of the present

situation has features which justify the publication of the report. The area covered by the local committees includes all the industrial portions of the country and a number of the semirural districts, and furnished three-fourths of all the children who had left school in the official year preceding the study.

The total number of boys and girls shown by committees as having left elementary schools in their areas during the year ended March 31, 1929, is 421,829 (210,613 boys and 211,216 girls); the corresponding figure for the whole of England and Wales is 556,107 (278,101 boys and 278,006 girls). The present survey, on this basis of comparison, includes approximately 76 per cent of the total number of juveniles who left elementary schools in England and Wales in the year in question.

The committees were asked to make an estimate of the juveniles in their districts and their position in regard to employment, as of May 26, 1930. A summary of their replies is presented in the following table:

POSITION OF JUVENILES RELATIVE TO EMPLOYMENT, MAY, 1930

Position	Boys		Girls		Total	
	Number	Per cent	Number	Per cent	Number	Per cent
Employed away from home.....	765,827	80.1	652,410	69.7	1,418,237	74.9
Available, but unemployed:						
On live register.....	30,550	3.2	31,466	3.4	62,016	3.3
Others.....	22,002	2.3	30,801	3.3	52,803	2.8
Total available.....	818,379	85.6	714,677	76.4	1,533,056	81.0
Not available for employment.....	137,198	14.4	221,414	23.6	358,612	19.0
Total resident in area covered.....	955,577	100.0	936,091	100.0	1,891,668	100.0

The "others" available for employment but not on the live registers include those who have reached an employable age but are remaining in school pending an opportunity to go to work. Those not available are the juveniles who are continuing their education, or girls who are simply staying at home. The percentage available for employment differs considerably in different localities.

In Wales, where coal mining predominates, the average proportion of boys available for employment, but unemployed and on the live register, was 7 per cent (Rhondda, 14 per cent), compared with 3.2 per cent for the country as a whole and 1.5 per cent for the London area. The proportion of girls estimated to be not available for employment similarly varies from an average of 40 per cent in Wales (nearly 60 per cent at Ebbw Vale) to 7 per cent in certain Lancashire cotton areas; in the Merseyside area the corresponding figure was about 29 per cent; in London, 18.7 per cent; while the figure for the whole country was approximately 24 per cent.

Surplus and Shortage of Juvenile Labor

A STUDY of the distribution of the juveniles available for employment showed that in a number of areas there was a surplus supply, amounting in the aggregate to 68,330 boys and 105,740 girls, and in others a shortage aggregating 47,680 boys and 38,860 girls, making a net surplus for the year ended March 31, 1931, of 20,650 boys and 66,880 girls. From that date onward it was calculated there would be a net shortage, though always this would be accompanied by a

surplus in some areas. The committees considered that this shortage would affect most strongly the distributive industries and those employing unskilled or semiskilled labor. As to how it would be handled there was some uncertainty, but since the shortage of boys is greater than that of girls, some considered that girls would naturally tend to enter occupations hitherto filled by boys, and that at the same time there would be a tendency for girls who would normally have remained at home to enter the labor market. The general situation it was felt, would increase the difficulty of securing persons for domestic service, and in certain districts would affect the needle trades, which are already in some cases finding it hard to gain recruits owing to the low wages paid.

The principal occupations in which it is thought that girls may to some extent displace boys are: Office work; messengers; the distributive trades; the lighter branches of engineering and factory work; the boot and shoe industry; the textile trades; manufacture of cutlery; and certain branches of textile bleaching, dyeing, printing, and finishing works.

Methods of Meeting Shortage

SOME of the committees report that in certain areas employers may resort to the engagement of married women in such industries as boot and shoe making, the wholesale clothing trades, cardboard box making, hosiery, lace, and confectionery. In other cases such as coal mining, engineering, the leather trades, and laundries, employers are already introducing a greater use of machinery and other methods which reduce the number of young workers required. In still others, they are taking measures to utilize adult labor; in the woolen industries, for instance, it is considered possible that two men may be engaged for work which hitherto has been done by one man and two boys. In other cases the practice of discharging young workers who have reached 16 and replacing them by children just out of school may have to be given up, while in the distributive trades it may be desirable to evolve a central system, employing motor transport to overcome the shortage of errand boys.

Transference

TRANSFER of juveniles from districts having a surplus to those having a shortage is the obvious method of meeting the situation, but some of the committees oppose this, pointing out that there is usually a lack of suitable accommodations for housing the transferred juveniles, that their wages are ordinarily too low to support them when away from home, that the absence of parental control for those thus transferred constitutes a serious objection to the plan, that the work for which juveniles are needed is often seasonal in character, and that in their new environment no alternative employment may be open to them on the conclusion of their temporary and non-progressive work.

These objections do not apply to the employment of juveniles in districts so near their homes that they may travel back and forth daily, and some of the committees favor this plan, recommending that special rates be secured for such travel, or that employers make an allowance for it. Such a solution is not possible in Wales, where large numbers of boys and still larger numbers of girls can not hope

to find work either locally or in near-by communities. Fourteen committees in Wales considered that transference offered the only escape from the difficulty. "Five of the reports suggest that only girls should be transferred, but one committee adopts the opposite view—that boys should migrate but that girls should be persuaded to enter resident domestic service in the committee's area."

General Suggestions

THE development of a transference scheme with financial aid from the public to help in juveniles' maintenance and traveling expenses is suggested by several of the committees in Wales. In connection with this it is proposed that a system should be established of linking particular supply areas with particular shortage areas, so that the transferred juveniles may find themselves among accustomed associates. Another suggestion is that groups of juveniles should be transferred from the surplus areas to training centers under the control of the authorities of shortage areas, in order that they may be more conveniently selected and absorbed. A change in school arrangements is also advised, in order that juveniles may leave as soon as they reach the required age, instead of having to remain until the end of the term, as now. Improved training at school for employment is suggested, together with experiments in the practical application of psychological tests in relation to choice of occupation.

British Attitude Toward Wage Reductions as a Remedy for Depression

IN NOVEMBER, 1929, the Chancellor of the Exchequer appointed a committee, giving it the following terms of reference:

To inquire into banking, finance, and credit, paying regard to the factors both internal and international which govern their operation, and to make recommendations calculated to enable these agencies to promote the development of trade and commerce and the employment of labor.

Lord Macmillan was chairman, and the other members of the committee were Sir Thomas Allen, Ernest Bevin, Lord Bradbury, R. H. Brand, Prof. T. E. Gregory, J. M. Keynes, Lennox B. Lee, Cecil Lubbock, Reginald McKenna, J. T. Walton Newbold, Walter Raine, J. Frater Taylor, and A. A. G. Tulloch, with G. Ismay of the treasury as secretary.

The report of the committee, presented in June, 1931, in a volume of 322 pages, deals mainly with matters of finance, banking, and credit.¹ The committee feels that various changes in the present system are necessary if the economic distress of the world is to be relieved, and on the whole the changes advocated are in the direction of an expansion policy, calculated to increase the volume of investment and credit by every available means. Changes in monetary policy alone, however, they hold, will be insufficient to remedy the present situation. "It is of the greatest importance that other domestic action, not of a strictly monetary character, should be taken as an essential condition to the monetary authority being in a position to

¹ Great Britain. Treasury. Committee on Finance and Industry. Report. London, 1931. (Cmd. 2997.)

employ effectively the methods of monetary policy." As it was somewhat uncertain whether their terms of reference covered such other matters, several addenda are added to the report, one signed by six members, and three signed each by one, in which the signers present their views on questions they consider pertinent to the main inquiry. One of the subjects included is wage reductions as a means of improving the present situation.

Discussion of Wage Policy

PROFESSOR Gregory, in an addendum signed by himself alone, seems to favor a reduction of wages and salaries, though he is careful to point out that what is required is a reduction of costs per unit of output, that this is not necessarily tantamount to a reduction in wage rates, and that the workers have some grounds for objecting to a policy which will make them bear the brunt of the movement.

The workers may be right in insisting that a reduction of costs should not take place uniquely at their expense, through wage cuts and nothing else. Our methods of organization, salesmanship, the choice of leadership, etc., are all elements over which labor has little direct executive control, but which are extremely relevant to the problem of cost reduction.

Labor can, however, join in the movement without accepting wage cuts, Professor Gregory appears to think, if it will consent to give up "practices and regulations which have the direct effect of keeping costs up," but he does not enlarge on this point.

Another member, J. H. Brand, presents a memorandum signed by himself alone, pointing out that the immediate need for Great Britain is to increase exports and diminish imports, that the present unfavorable balance of foreign trade is due to the higher level of British costs as compared with competing countries, and that the desired change can be brought about only "by (1) a diminution of costs by means of either (a) greater efficiency or (b) a direct reduction of salaries and wages, or (2) special measures, such as a tariff for the restriction of imports accompanied presumably by some direct assistance to our exports."

The fullest discussion of the question, however, is found in the first addendum signed by six members, including J. M. Keynes and Reginald McKenna. The present stagnation, these maintain, is due not to any lack of available credit, but to the failure of acceptable borrowers to come forward. The first step must probably be some kind of direct stimulus, as, for example, a considerable fall in the rate of interest charged to borrowers, or some kind of State action. Either of these steps, if not accompanied by similar action elsewhere, would put a strain on the international position of the Bank of England, and to meet this a strengthening of the country's surplus on balance of trade is required.

We must either increase our favorable balance of international payments, or find an outlet for more of our savings at home, or, better still, do both. Indeed the whole problem may be made to center round the balance of trade. We can increase our surplus by exporting more or importing less. We can export more only if world trade revives, or if we reduce our gold costs faster than our competitors reduce theirs, or if we give the export industries some kind of special advantages. Similarly we can import less only by a relative reduction of our own costs or by some restriction on imports. Finally we can only find employment for more of our savings at home by increasing the enterprise of borrowers or by somehow subsidizing the cost of borrowing.

In practice, the courses by which these ends can be accomplished come down to three: (1) A reduction of salaries and wages; (2) control of imports and aid to the export industries; (3) domestic enterprise assisted by State action, or subsidies to private investment at home. It is admitted that all these courses would probably have some effect in the right direction, but it is held that their social and long-run effects may be very different. Those who advocate the first course feel that it is more fundamental and sounder, a position from which the signers of the addendum dissent entirely.

We feel exactly the opposite, namely, that the practical results of an attempt to reduce salaries and wages are likely to be exceedingly disappointing. They feel that it might be dangerous to divert the public mind from what they believe to be the ultimate necessity of (1) by offering remedies under (2) and (3) which may prove specious; whereas we believe that nothing is more likely to produce stalemate than to concentrate public attention on (1).

Need for General Application of Change, if Made

IT is admitted that so long as the standard of value is subject to wide variations when reduced to terms of consumable commodities, there may be need for some elasticity in money incomes, but it is pointed out that this is just as true of incomes derived from interest, rent, and the like as of incomes derived from wages. This does not apply to the normal and minor adjustments in wages which are continually taking place through the ordinary processes of bargaining as the price level changes, but to a substantial general change such as alone could have any effect on the present position.

We consider that a change of this character can not, with equity, be concentrated on salaries and wages, but should apply to every category of income alike, including those protected by contract. The benefit of an increased value of money is just as fortuitous in the case of the rentier as in the case of the wage earner, and the burden on enterprise and on the budget of having to pay the same amount of money as before to meet interest charges, though the value of money is greater, is similar in character to the burden of having to pay the same money wages as before. * * *

A large part of the national debt was incurred at a price level much higher than that which now prevails. The long period of deflation which culminated in the return to gold at the pre-war parity had the effect of increasing the burden of this debt. The fall in world prices which has occurred more recently has caused a large further aggravation of the burden. In view of the fact that the increase in the value of sterling was deliberately intended, it seems difficult to require a reduction of salaries and wages without proposing any modification of the uncovenanted blessings which accrued to the holders of the national debt and of claims on money generally and to other classes whose incomes have remained unaffected.

Doubts as to Effect of Wage Cutting

As to the policy of reducing wages in order to stimulate enterprise, it is pointed out that there is no certainty concerning its effect. It is impossible to calculate in advance what increase of employment could be expected from a given average reduction of wages. In many purely domestic industries, what the producer might gain in decreased cost would be offset by the lesser purchasing power of his customers, and in the industries supplying foreign trade there is no certainty that a reduction of wages in Great Britain would not be met by a corresponding cut in the competing countries. Moreover,

since wages are only a part of the cost of production, a cut reduces wages much more than it does the possible selling price.

It might be, therefore, that an attempt to remedy unemployment by general wage reductions would require very large reductions. As an illustration, an average reduction of money wages by 10 per cent would, since it would reduce total costs by much less than 10 per cent, have much less effect on our foreign trade than a tariff of 10 per cent on all imports and a subsidy of 10 per cent on all exports. Yet it would be optimistic to expect even from the latter more than a partial remedy. The same conclusion follows from a comparison between the wages paid here and those paid by our chief continental competitors.

In fact, to reduce money wages throughout all industries to a point sufficient to restore the foreign trade to a position of equilibrium might require cuts of from 20 to 30 per cent. The cut in real wages would not, of course, be nearly so great, owing to the fall in prices which would follow, but "an attempt to secure any such reduction might be expected to produce social chaos and react most unfavorably on trade generally."

Conclusion

THE signers of the addendum concede that it may not be possible, under all circumstances, to avoid a reduction of money costs in terms of gold, but they insist that such a reduction is a doubtful remedy, and one not to be undertaken until other methods of meeting the depression have been tried and found wanting.

It is not easy to see how we can expect a revival in our foreign trade, on a sufficient scale to be of much value to us, by any other means than through a revival of world demand. To meet the immediate problems, arising out of the world slump, a policy intended to direct increased purchasing power into the right channels, both at home and abroad, with a view to restoring equilibrium at the present level of costs, would, therefore, be much wiser in our judgment than a policy of trying to cut our costs faster than the rest of the world can cut theirs.

SOCIAL INSURANCE AND BENEFIT PLANS

Continuance of Group Life Insurance During Lay-Offs

THE General Electric News, June 19, 1931, published by the Fort Wayne works of the General Electric Co., contains the announcement by Pres. Gerard Swope of the plan to continue the group life insurance for employees who have been temporarily laid off for lack of work. Officials of the company have made arrangements with the Metropolitan Life Insurance Co. whereby the certificates which have been canceled because of the provisions limiting the period during which they will remain in force following temporary lay-off on account of lack of work may be reestablished for four months by the payment of the current monthly premiums. The provision became effective July 1, 1931, for all cases in which the premium was paid by July 10, and provided the payments are continued monthly thereafter.

The ruling extends to all group insurance certificates which call for termination after certain periods because of temporary lay-off on account of lack of work and includes the additional insurance and the free insurance certificates. It is expected that if no improvement in employment conditions has occurred at the end of this 4-month period a further extension of the period during which the insurance certificates may be kept in force will be considered.

Social Insurance in Italy, 1930

AN ARTICLE on the development of social insurance in Italy in 1930 in L'Organizzazione Industriale (Rome), June 30, 1931, states that the amount of contributions in Italy for social insurance was upwards of 693,000,000 lire (\$36,451,800),¹ which was about 10,000,000 lire (\$526,000) more than the year before.

The statement below shows the number of persons receiving specified types of benefit in 1930.

Number receiving benefit for—

Invalidity	17, 641
Old age	30, 402
Death	10, 134
Tuberculosis	9, 351
Maternity	44, 039

Tuberculosis patients were given care for 4,519,163 days, and members of their families for 1,546,132 days. The number of persons newly insured against this hazard in 1930 was 28,614.

The average number of persons insured against unemployment was 136,892 in 1930 as against 78,684 in 1929. From January 1 to

¹ Conversions into United States currency on basis of lira=5.26.

August 31, 1930, payment was made for 18,457,091 days of unemployment and for the corresponding period in 1929, for 12,216,989 days.

Seamen's insurance.—According to La Stirpe (Rome), April, 1931, contributions paid into the Merchant Seamen's Invalidity Fund in 1930 amounted to 33,511,998.72 lire (\$1,762,731), while benefits paid amounted to slightly over 33,000,000 lire (\$1,735,800).

The number of pensioners was 1,043; of these, 176 were receiving benefit for invalidity, 377 for old age, and 490 the widows' and orphans' benefits. In addition, temporary benefits were being paid to widows and orphans in 104 cases, and extra allowances were being made for invalidity in 162 cases.

OLD-AGE PENSIONS

New Hampshire Old-Age Pension Law

NEW HAMPSHIRE, by an act (chapter 165) of the 1931 State Legislature, became the seventeenth State to enact legislation "for assistance to aged and dependent persons."¹ At the beginning of the legislative year of 1931, 12 States had already extended the benefits of an old-age pension system to the needy and indigent aged citizens of the State. By virtue of the 1931 session of five State legislatures (those of Delaware, Idaho, New Hampshire, New Jersey, and West Virginia) the number of such States having old-age pension laws was increased to 17. Many bills were introduced in other States but without success. The law adopted in New Hampshire was passed after the supreme court of the State had declared a previously proposed old-age pension law invalid, holding that as it made age the only test of relief it would be void because in violation of a provision in the State constitution. (Opinion of Justices, on Senate Bill No. 3, relating to old-age pensions, March 2, 1931, New Hampshire Supreme Court.) To meet the technical objections the bill was revised, was passed by the Legislature, and was signed by the Governor on May 7, 1931.

The new law provides for a system of assistance "for the more humane care and relief of aged and dependent persons." Relief is to be extended by the counties, with reimbursement by the city or town legally chargeable for the assistance rendered.

Residence in the State or county for 15 years is required, and citizenship for the same period.

Analysis of Act

Date of approval.—May 7, 1931; in effect September 1, 1931.

Establishment of system.—In each county of the State. The county commissioners administer the act. The county pays in the first instance and is reimbursed by each city or town legally chargeable for the expense.

Requirements for pension.—To be eligible under the law the applicant must be (1) 70 years of age; (2) a citizen of the United States for 15 years; and (3) a resident of the State and of the county for 15 years. The following are ineligible for the pension: (1) A person who is able to support himself or has a child or other responsible person able to support him; (2) who has property exceeding \$2,000; (3) who has deprived himself of any property for the purpose of obtaining a pension; (4) who is an inmate of a correctional or charitable institution; (5) who is in need of continued institutional care; (6) who has been imprisoned during the 10 years preceding the date of application; (7) who (if a husband) has failed to support his wife and children

¹ Other States having such laws are California, Colorado, Delaware, Idaho, Kentucky, Maryland, Massachusetts, Minnesota, Montana, Nevada, New Jersey, New York, Utah, West Virginia, Wisconsin, and Wyoming.

(under 16 years) for 6 months or more during the 10 years preceding the application for relief; or (8) who has been a habitual tramp, beggar, or drunkard within one year prior to the date of making application.

Application.—Application must be made to the county commissioners of the county in which the applicant resides. A statement under oath on forms prescribed by the commissioners is required.

The county commissioners are empowered to make investigations of the conditions of the applicant and to determine the amount to be granted. The applicant is entitled to a hearing (provided petition is filed within 14 days after date of application) before any decision becomes effective. A rejected applicant may not apply again for 6 months.

Benefits.—The amount of pension allowed is fixed according to the condition of the applicant, subject, however, to a maximum of \$7.50 per week from all sources. A certificate is issued to the applicant showing the date upon which the payments will commence and the amount of the weekly or monthly pension. Upon the death of a beneficiary an additional allowance of \$125 is made, provided the estate is insufficient to defray the funeral expenses.

As a condition to the granting of assistance, the county commissioners may require that any property of the pensioner be transferred to the county and held in trust. Upon the death of any pensioner the administrator must pay to the county, city, or town the sum paid to such person plus 4 per cent interest. The attorney general or the county solicitor is authorized to represent the public officials in matters arising under the act. The county treasurer must disburse all moneys ordered by the commissioners, unless provided otherwise by the proper officials of the town and State.

Revision or revocation of benefits.—Pensioners are prohibited from receiving any other public relief, except for medical and surgical assistance. Acceptance of any other public relief operates as a revocation of old-age assistance. If a beneficiary is convicted of a criminal offense or fails to comply with the terms of the act, assistance is also revoked.

If a pensioner is incapable of taking care of himself or his money (upon the testimony of three disinterested and reputable witnesses), the county commissioners may direct the payment to any responsible person for the benefit of the pensioner or may suspend payment if deemed advisable.

Assignment, etc., of pension.—Old-age assistance is exempt from attachment and from any tax levy of the State.

Reports.—The county commissioners of each county must make a report to the city or town officials, before February 1 of each year, showing (a) total number of applicants for assistance; (b) amount of pensions paid; (c) number of pensions granted, denied, and canceled; and (d) the number chargeable to the county and to each city and town.

Violations.—Violations of the act are punishable by a fine not to exceed \$500, or imprisonment not to exceed one year, or both.

INDUSTRIAL AND LABOR CONDITIONS

Provisions in Collective Agreements Regarding Employers Working at the Trade

EMPLOYERS are prohibited from working at the trade in a number of collective agreements, while those permitting an employer or a member of a firm or corporation to do the work of a journeyman generally specify the conditions under which he may do such work.

A few agreements of bakery workers permit the employer to work in his own shop but stipulate that he shall give two nights' work a week to the union; if there are two members of a firm, only the one which signs the agreement will be permitted to work at the trade.

Many agreements permit one member of a firm or corporation to use the tools of the trade, but stipulate that he must be a competent mechanic and shall become a member of the union; other agreements require that employers must obtain permission from the joint arbitration board before working at the trade. A few agreements permit two members of a firm or corporation to work at the trade. The majority of the agreements permitting the employer to use the tools of the trade prohibit him from working overtime or on Sunday or holidays, while others stipulate that he may work as a journeyman only when he employs a certain number of journeymen or in case of an emergency. A few agreements provide that if the employer works at the trade he shall not be permitted an apprentice.

One agreement provides that any member of the union who works on a job where more than one member of a contracting firm uses the tools (unless they are members of the union and carry the current working card) shall be fined \$5 a day for each day he so works. Another agreement stipulates that the contractor shall pay an annual fee for the privilege of using the tools of the trade and that this fee shall be used to help defray the expenses of the union.

The following quotations are selected from agreements received by the bureau, which contain provisions on the subject:

Bakery and confectionery workers.—Where there are two members of a firm, only the one who signs the agreement will be permitted to work at the trade, and only for five days a week. An employer working in his own shop shall allow two nights' work a week to the union.

Partners or shareholders of bakeries may work in such bakeries only when they retain their union membership and comply with the rules governing the hiring of employees through the union office.

Barbers.—Only one member of a firm will be permitted to work in the shop before 8 a. m.

Where there are two partners in a shop and no journeyman barber is employed, one of the partners must join the union.

Brickmakers.—Nothing in this agreement shall prohibit an employer, one foreman, or one member of any firm from working on the yard not more than two hours on any one day.

Asbestos workers.—No member of a firm or officer of a corporation or their representatives or agents shall execute any part of the work of application of materials.

Bricklayers, masons, and plasterers.—Contractor shall not work with the tools of the trade unless he is a practical bricklayer and he must not work outside the regular hours.

Under no circumstances shall a boss lay brick on a wall before or after hours or on holidays except in extreme necessity.

Not more than one member of any firm or corporation shall be permitted to work on the wall of any job at any time unless permission has first been given by the joint arbitration board.

Carpenters and joiners.—Not more than one member of contracting firm shall be permitted to use tools on the job unless they be members and carry the current working card. A member working where this provision is violated will be fined \$5 a day for each day he so works.

Not more than two members of contracting firm shall use tools on the job. Employer shall not use tools on overtime or Sunday work.

Cement finishers.—Only one member of contracting firm shall be permitted to use tools and he must be a competent cement finisher.

Electrical workers.—Employers agree that no member of their organization will use tools or do any work on construction or electrical work or repair work, but shall have such work done by the members of Local No. —.

Only one member of a firm shall work with tools and he must be a member of the local union and work only during regular working hours. Any work outside these hours must be done by the journeymen employed.

Glaziers.—Only one member of contracting firm shall be permitted to work at trade and he must employ journeymen on the job at all times.

Any employer who does the work of a journeyman must carry a card of membership in the union.

Lathers.—All contractors and solicitors shall pay for the privilege of using the tools the sum of \$88, to be paid in two installments, on the 1st day of January and of July, said fee to be put into the general fund to help defray the expenses of the union. No solicitor shall be allowed to work on any job unless accompanied by at least one journeyman member of this union, provided that the job does not take more than four hours to complete.

Painters, decorators, and paper hangers.—Only one member of contracting firm will be recognized and allowed to work with the tools. Should more than one member desire to work it will be necessary for all others to become members of the union. This applies to old or repair work. No master painter will be permitted to work on new work.

Where firms consist of two or more persons working on an average of four men, not more than one shall work at the trade without being a member of the union.

Operative plasterers.—No plastering contractor shall use the tools in application of plaster.

Not more than two members of a firm shall be permitted to work with the tools and they must conform to the rules for journeymen.

Only one member of firm shall be allowed to use tools, and no employer shall be allowed to work unless he has one or more journeymen working for him.

Plumbers and gas fitters.—But one member of the firm shall handle tools. No master plumber shall work on new work unless he employs a journeyman or when a journeyman can not be secured from the local. All work of more than eight hours shall be classed as new work. Master plumbers working on new work shall confine themselves to hours and rules of the local union.

Members of Local No. — are not allowed to work on a job where more than one member of the firm works with the tools.

Sheet-metal workers.—No employer or member of the firm shall be allowed to handle tools on outside work; only one member of the firm shall be allowed to work in the shop, and at least one journeyman must be employed.

There shall be no restriction on an employer using the tools of the trade.

Slate, tile, and composition roofers.—Only one member of a firm is allowed to work on any job and he must be a practical roofer.

No member of a firm or company may work as a mechanic or apprentice roofer without a legal permit from Local No. —. These permits to be limited as to time and the work to be done, and will not be issued except in case of emergency.

Steamfitters.—Only one employing steamfitter will be allowed to do pipe or repair work and said employer who handles the tools must signify in writing his intention to do such work to the secretary of employing steamfitters and to the secretary of Local No. —. No employer will be allowed to handle tools unless he first has one man from the local union.

One member of an employing firm shall be allowed to work with the tools, provided said employer has one or more members in his employ. When so engaged he shall not be furnished an apprentice and shall only work during regular working hours.

Structural and ornamental iron workers.—An employer, contractor, or one member of a firm may work on their jobs on any building.

No contractor to use tools of the trade; only to be recognized in directing the work.

Re ail clerks.—In firms of two or more members only one may be employed as manager; all the rest shall become members of Local No. —.

If a firm of two partners discharges the only clerk, one member of the firm must become a member of the union. Should any clerk employed by the firm become a member of the firm as partner or shareholder, he must continue as a member of the union and the firm shall assume obligation for his membership and for the payment of his regular and special union dues and assessments and shall pay same if member defaults in the payment.

Cloth hat and cap makers.—The employer agrees that no foreman or forelady will do any work in any of the branches above enumerated, and that should the firm consist of more than one person, no member of the firm or stockholder or officer or director, if the employer be a corporation or partnership, will perform any work in the branches above enumerated except one individual and then only when the full set of workers are employed.

Should any work be done in violation of this clause the employer shall become liable for, and pay to the union, a sum of not less than one week's wages for the respective branch at the minimum base rate. Should a union worker be laid off and any member of the firm, foreman or designer, or any worker who is not a member of the union do his work, the employer, in addition to the one week's wages provided for above, shall reimburse the worker so laid off for loss of earnings.

Fur workers.—Not more than two members of firm shall be entitled to work on bench or floor. Should an added number of such employers desire to work on bench or floor they must become members of the union.

Ladies' garment workers.—The employer agrees that no member of firm, foreman, or forelady will do any work in any of the branches above enumerated, except for purpose of instructing workers. Should a union worker be laid off and any member of the firm or any one else who is not a member of the union do his work the employer shall reimburse the worker so laid off for loss of earnings based upon the amount of work done by such person.

Cloth examiners and shrinkers.—No employer shall at any time be permitted to perform journeymen's work. Employers shall have the right to show pieces to customers and adjusters when same have already been examined by journeymen.

Pocketbook workers.—No employer or foreman shall make it a practice of filling position of any worker in any particular branch.

Hotel and restaurant employees.—Only two working partners will be recognized in any establishment and both must be responsible for payment of wages.

No employer will be allowed to work as a waiter.

Butcher workmen and meat cutters.—If employer is a corporation all workers in the business, whether stockholders or not, shall be considered as employees under this agreement and must keep the working rules of the union.

Typographical workers.—No proprietor shall be permitted to do any mechanical work in a plant which enjoys the use of the union label unless he is a member of this union.

Electrotypers.—Any person or officer of corporation owning 20 per cent of the stock in any electrotyping company shall not be permitted to perform any work except that of supervision in such corporation.

Stonemasons and marble setters.—Under no consideration shall an employer apply himself to setting, cleaning, or pointing any stonework.

Stonecutters (sculptors and carvers).—Only one member of a firm of contractors shall work with the tools and he must pay dues to the association.

Teamsters and chauffeurs.—The local union agrees to furnish a driving card to one employer in each firm who is in good standing in the union.

No employer shall be permitted to do any driver's work, and not less than two drivers or chauffeurs shall be employed at any shop.

Upholstery workers.—Only one member of a firm is privileged to do upholstering work.

No owner, partner, or stockholder shall be permitted to do work classified as upholstery work unless the regular workers are employed.

Bankruptcy Among Wage Earners

THE number of cases of bankruptcy among wage earners has increased rapidly in the last decade according to an article¹ in a recent issue of the American Bankers Association Journal.

The fact of wage earners going into bankruptcy, it is said, is not new. In 1920 there were approximately 6,000 wage earners in the country who were declared bankrupt; in 1925 there were 14,500 such bankruptcies; and in 1930, 29,000. If this rate of increase should continue for another 10 years, the writer states, 1 out of every 15 wage-earner families would be potentially bankrupt. During the fiscal year 1929-30, the number of wage earners discharged in bankruptcy was almost equal to the number of bankruptcies in agriculture and all lines of business.

From the time of the enactment of the Federal bankruptcy act in 1898 the trend of bankruptcies among wage earners followed the curve of business bankruptcies. With the depression of 1920-21 there was a rapid increase in business failures, but since 1925 business bankruptcy has not increased while failures among wage earners have continued to grow in number. Not all of these bankruptcies may be properly ascribed to wage earners, however, as in some cases they may be disguised business bankruptcies, that is, the failure may be that of a business enterprise which a wage earner has engaged in as a secondary occupation. In other cases bankrupts may be classified as wage earners because they had become employees after filing petitions in bankruptcy. The cases which are really wage-earner bankruptcies include those in which the sudden occurrence of some large financial obligation such as hospital expenses or the need for relief from debts due to court judgments force the worker into bankruptcy, or they are "consumer bankruptcies" caused by the failure over a period of time to balance the family budget, so that sickness, unemployment, extravagance, reduction of income, or installment buying have brought on the crisis.

Prior to 1921 the majority of the wage-earner bankruptcies were associated with business reverses, but since that time there has been small increase in the failures from this cause, the chief increase having been in consumer bankruptcies. The increase in the number of consumer bankruptcies in the last 10 years coincides with the increase in the extension of consumer credit, especially in the cities, through the development of installment buying.

Wage-earner bankruptcy can not be considered as a national problem, the writer states, because of the difference in State laws which affect the rights of debtor and creditor. In many industrial centers wage-earner bankruptcies are practically unknown, while in others such failures are numerous. In four of the larger cities of Kentucky (a State which allows the garnishment of wages) 89 per cent of the bankruptcies in 1929, for example, were those of wage earners. The States in which the largest number of failures of wage earners occurred were Alabama, Tennessee, Oregon, Georgia, Virginia, Kentucky, and Maine, the number of failures per 10,000 wage earners ranging from 40 in Maine to 110 in Alabama. The number of business bankruptcies showed an extremely high rate in Oregon and Nevada, but the varia-

¹ American Bankers Association Journal, July, 1931, p. 9: Why Wage Earners Go Bankrupt, by Roll Nugent.

tion among the States was small in comparison with the rate of wage-earner bankruptcy. The rate for the State having the highest number of business bankruptcies was only 10 times that of the lowest, while the rate for wage-earner bankruptcies in Alabama, the State having the highest rate, was more than 350 times the rate in South Carolina, which had the smallest number of such failures.

Although it has been suggested that the cause of the increase of failures among wage earners lies in the increase in the use of the new forms of consumer credit, the bankruptcy records hardly bear out this belief as far as reputable business houses are concerned, as examination of more than 1,000 wage-earner bankruptcy petitions failed to show a single case where a legally operated loan company or reputable installment house had contributed in any important degree to the failure. The writer considers that the cause lies rather in the changed attitude on the part of the majority of people toward debt, so that whereas formerly they hesitated to put a mortgage on their homes, now the average person is indifferent to the fact of incurring debt, a condition which has favored the growth of dishonest installment houses and loan companies.

In those States in which the wage-earner bankruptcy rate is low it does not necessarily mean that financial disasters are not occurring, but, rather, that the wage-earner debtor can not be made to pay and, therefore, is not forced into bankruptcy. However, in the States which permit garnishment of wages without restriction or the use of wage assignments as security for loans or credit sales, the ease of collection against wages has encouraged the development of credit businesses and loan companies that can only be classed, the writer says, as "racketeers." Suits brought in justice of the peace courts result in a large number of judgments for the plaintiff, since the fee goes to the justice of the peace, and as the creditor is the source of business he is, as a result, the favored party in the suit. In one such court in Lexington, Ky., 627 judgments against wage earners for loan-company debts and 318 judgments for installment debts were rendered in a period of four and one-half months in 1929. These installment debts represent purchases at about three times their value, and the loan-company suits for principal and interest range from 100 per cent to 960 per cent per annum. Court costs are added in each case to the bill, which is already too burdensome for the purchaser or borrower to pay.

Because of the ease with which collections are enforced through the courts, many employers have made it a rule to discharge any employee whose wages are garnished. Where no such rule is in effect the employer is used practically as a credit-account collector, a case being cited of one large employer of labor in Kentucky, known for his liberal personnel policies, of whose employees 30 per cent were garnished in one year. On the other hand, if there is fear of discharge, when wages are assigned, the man who has purchased too largely of installment goods is likely to borrow from the loan companies at a high rate of interest until, finally, since the creditor can seize all of the debtor's wages, he is forced into bankruptcy.

The question of wage assignments was also the subject of an editorial in the July 27 issue of the Journal of Commerce, based on a recent appeal by the Legal Aid Society for legislation which will place

restrictions upon the assignment of future wages as security for debts. A man may assign his entire future wages to secure payments on an installment sale contract and many cases of great hardship have been brought to the attention of the society by charity organizations. It happens, frequently, that wage earners sign contracts without knowing that future earnings will be forfeited in case of failure to meet the installment payments. A large number of States have passed laws restricting or regulating the right to make contracts assigning future wages and in a few cases have actually prohibited it, although it is questionable, it is said, whether a law of this extreme type would not be considered an unconstitutional interference with liberty of contract. The United States Supreme Court has, however, the editorial states, "upheld a State law that made assignment of future wages invalid unless recorded, accepted in writing by the employer and company, and accompanied by written consent of the employee's wife." Such restrictions would protect employees from ignorance of the contract, and the necessity of obtaining the employer's consent would help to deter the wage earner from signing away his earnings. Some such legislation is desirable, therefore, for the employee, for the employer, and for the public, since the type of business which has to depend upon wage assignments is not one which it is desirable to encourage.

Provision for Chinese National Economic Council

A NATIONAL Economic Council is to be set up in China, in accordance with the following draft regulations adopted on May 30, 1931, by the Legislative Yuan:¹

ARTICLE 1. In order to accelerate economic reconstruction, improve the people's means of livelihood, and regulate national finances, the National Government shall establish a National Economic Council (Commission).

ART. 2. The National Economic Council shall be under the jurisdiction of the Executive Yuan.

ART. 3. All State projects for economic reconstruction or development, for which the requisite funds are either borne or subsidized by the national treasury, must be first investigated and considered by the National Economic Council before submission to the National Government for approval.

ART. 4. In the carrying out of the projects for economic reconstruction or development mentioned in the preceding article, the National Economic Council may investigate into the work as well as the expenditure involved.

ART. 5. The President and Vice President of the Executive Yuan, the Ministers of the Interior, Finance, Railways, Communications, Industries and Education, as well as the responsible heads of the various Central Government organs connected with economic reconstruction shall be ex officio members of the National Economic Council, upon appointment by the National Government.

In addition to the ex officio members mentioned in the preceding paragraph, there shall be not more than 11 members, who shall be appointed by the National Government on the recommendation of ex officio members.

ART. 6. The National Economic Council shall have a chairman and a vice chairman, which posts shall be held respectively by the President and the Vice President of the Executive Yuan.

The chairman shall preside at meetings of the council; in the absence of the chairman, the vice chairman shall act in his place.

ART. 7. The National Economic Council shall have a secretary-general, with the rank of *Chien-jen*; from 2 to 4 secretaries, of whom 2 shall have the rank of *Chien-jen*, and the others the rank of *Tsien-jen*; from 4 to 8 experts, of whom 4 shall have the rank of *Chien-jen* and the others the rank of *Tsien-jen*.

¹ China. Ministry of Industries. Bureau of Industrial and Commercial Information. The Chinese Economic Bulletin, Shanghai, June 13, 1931, p. 308.

The secretary-general shall attend to the administrative affairs of the Council in accordance with the instructions of the chairman and the vice chairman. The secretaries shall assist the secretary-general in attending to such administrative affairs.

The experts shall attend to matters pertaining to economic planning.

ART. 8. The National Economic Council may organize experts' committees to study technical problems as well as appoint technical experts to supervise or direct the carrying out of various projects.

ART. 9. The rules of procedure of the National Economic Council shall be enacted separately.

ART. 10. The present regulation shall become effective from the date of promulgation.

Number of Skilled Workers in Germany, 1925

THE results of the last occupational census undertaken in the middle of 1925 in Germany have recently been published.¹

According to these data, out of the total number of 14,433,000 workers in Germany, 6,595,000 (or 46 per cent) were skilled and 7,838,000 (or 54 per cent) were semiskilled and unskilled. They were distributed among the principal industry groups as follows:

TABLE 1.—SKILLED, SEMISKILLED, AND UNSKILLED WORKERS IN GERMANY IN 1925

Industry group	Number of workers			Per cent of total	
	Skilled	Semi-skilled and unskilled	Total	Skilled	Semi-skilled and unskilled
Agriculture and forestry.....	188, 000	2, 419, 000	2, 607, 000	7	93
Manufacturing industries and handicrafts.....	5, 830, 000	3, 951, 000	9, 781, 000	60	40
Transportation and communication.....	433, 000	1, 007, 000	1, 440, 000	30	70
Government, public health, etc.....	144, 000	461, 000	605, 000	24	76
Total.....	6, 595, 000	7, 838, 000	14, 433, 000	46	54

The proportion of the skilled, and of the semiskilled and unskilled workers in various branches of manufacturing and handicraft industries was as follows:

TABLE 2.—PER CENT OF SKILLED, AND OF SEMISKILLED AND UNSKILLED WORKERS, BY INDUSTRY

Industry	Per cent		Industry	Per cent	
	Skilled	Semi-skilled and unskilled		Skilled	Semi-skilled and unskilled
Mining, including salt and peat works.....	83	17	Musical instruments.....	58	42
Woodworking and carving.....	70	30	Water, gas and electrical works.....	57	43
Machines, apparatus, and vehicles.....	70	30	Leather and linoleum industries.....	55	45
Iron, steel, and metal products.....	65	35	Iron and metal works.....	54	46
Clothing.....	65	35	Textile industries.....	44	56
Building and related trades.....	64	36	Printing and paper industries.....	43	57
Electrical, mechanical, and optical trades.....	59	41	Stone and earthen industries.....	38	62
Food and confectionery.....	59	41	Chemical industry.....	23	77
			Rubber and asbestos trades.....	15	85

¹ Statistik des Deutschen Reiches, vol. 408, pp. 181-186, as reported by the Gewerkschafts Zeitung for July 25, 1931, pp. 472-474.

Increase in Number of Looms per Weaver at Nelson, England

THE Labor Review for April, 1931 (p. 134), contained an account of the dispute in the English cotton-textile industry over the employers' effort to increase to eight the number of looms operated by a weaver, which ended in the withdrawal of the proposal and the resumption of work on the old basis of four looms per weaver.

Some individual employers, however, were not willing to give up the idea and have been seeking a basis of agreement with the weavers under which the new plan might be tried. According to the Manchester Guardian for July 21, 1931, a large firm at Nelson has put forward terms, which have been accepted by the weavers' association, providing for a number of reforms in the industry and for the operation of eight looms per weaver with a minimum or "fall-back" wage of 58s. (\$14.11)¹—60s. (\$14.60) in the case of artificial silk looms—for a week of 48 hours. A bonus system provides higher earnings for increased output. Other details are thus summarized:

The speed of the looms will be determined by experience, and reports will be presented by outside investigators. Yarn will be carefully selected and prepared in order to reduce breakages to a minimum. The firm will supply auxiliary labor for sweeping, cleaning, oiling, "cut," and weft carrying; new preparatory machinery will be required, and the displaced labor (if any) in the weaving sheds will be given the first available opportunity of this alternative employment. No deduction will be made from the weaver's wage under this system for the production of alleged unmerchantable cloth.

The scheme has not yet been adopted by the employers' association, but it is said that this particular firm intends to go on with it, whatever the attitude of other employers may be.

¹Conversions into United States currency on basis of shilling=24.33 cents.

INDUSTRIAL ACCIDENTS

Quarry Accidents in the United States in 1929

THE report of the United States Bureau of Mines on quarry accidents in the United States during the calendar year 1929, published as its Bulletin 338, shows an increase of 13 per cent in the fatality rate, as compared with 1928, but a decrease of 1.4 per cent in the nonfatal injury rate.

According to accident reports, furnished to the United States Bureau of Mines by the operating companies and covering practically the entire industry, the average number of men employed in and around the quarries and at crushers, cement mills, lime kilns, and rock-dressing plants in 1929 was 85,561, or 4,106 less than the number reported for the previous year. The average worker was employed 268 days during the year, as compared with 272 days in 1928, and the aggregate volume of employment was equal to 22,967,579 man-days, a decline of 6 per cent from 1928.

Accidents during the year resulted in 126 fatalities, or 7 more than in 1928, and 9,810 nonfatal injuries, a decrease of 758. It is estimated that these 9,936 accidents represented a total loss of time equal to 1,126,392 man-days or 113 days per accident, as against 110 days in 1928. Seventy-eight of the fatal and 6,173 of the nonfatal injuries occurred to the men working in and about the quarries.

Table 1 shows the number of men employed, and the number of men killed and injured in the quarrying industry, for 1911 to 1925 by 5-year periods and for 1926 to 1929 by years:

TABLE 1.—NUMBER OF MEN EMPLOYED, NUMBER KILLED AND INJURED, AND FATAL AND NONFATAL ACCIDENT RATES IN QUARRIES, 1911-1929

Years	Average days active	Men employed		Number killed		Number injured	
		Actual number	Equivalent in 300-day workers	Total	Per 1,000 300-day workers	Total	Per 1,000 300-day workers
1911-1915 (average).....	240	103, 803	83, 206	182	2. 19	7, 437	89. 39
1916-1920 (average).....	259	80, 682	69, 630	146	2. 10	11, 161	160. 29
1921-1925 (average).....	263	86, 967	76, 377	136	1. 78	13, 247	173. 44
1926.....	271	91, 146	82, 361	154	1. 87	13, 201	160. 28
1927.....	271	91, 517	82, 609	135	1. 63	13, 459	162. 92
1928.....	273	89, 667	81, 325	119	1. 46	10, 568	129. 95
1929.....	268	85, 561	76, 559	126	1. 65	9, 810	128. 14

Figures for the period 1911-1915 indicate unusually low rates for nonfatal injuries, but it is believed that this is due to incomplete records of minor injuries in these early years of accident reporting.

The additional hazard of employment in and around quarries, as against employment in outside plants, is plainly indicated by the difference in accident frequency rates for the two groups. In and

about quarries the fatal and nonfatal injury rates were respectively 2.18 and 172.48 per thousand 300-day workers in 1929, against 1.99 and 162.46 in 1928, while in outside plants the fatal and nonfatal injury rates were respectively 1.18 and 89.21 per thousand 300-day workers in 1929 as against 0.99 and 100.34 in 1928.

Falls or slides of rock or overburden caused 24.4 per cent of the fatal accidents in and about the quarries. Other principal causes were explosives (21.8 per cent), haulage (11.5 per cent), falls of persons (10.3 per cent), machinery (9 per cent), and boiler or air-tank explosions (9 per cent). Of the nonfatal injuries to workers in and about the quarries 23.6 per cent were caused by handling rock at the quarry face. Flying objects were responsible for 14.3 per cent, falls or slides of rock or overburden for 10 per cent, haulage for 9.5 per cent, and machinery for 7.6 per cent.

Fatal accidents at outside plants were chiefly due to haulage (29.2 per cent), machinery (27.1 per cent), falling objects (10.4 per cent), falls of persons (8.3 per cent), and electricity (6.3 per cent). Nonfatal injuries to workers in outside plants were caused mainly by flying objects (17.6 per cent), handling materials (17.6 per cent), machinery (11.6 per cent), falls of persons (9.8 per cent), and falling objects (9.3 per cent).

Comparative records for fatal accidents in quarries and mines for a period of 19 years, 1911-1929, show that the fatality rate for metal mines was higher than the rate for quarries in the same year, and that the fatality rate for coal mines was even higher than the rate for metal mines, except for one year, 1917.

A summary of the comparative records is presented as Table 2, which shows the number of workers, calculated as 300-day employees, and the fatality rates on this basis for quarries, metal mines, and coal mines, 1911 to 1929.

TABLE 2.—COMPARISON OF FATALITY RATES FOR QUARRIES, METAL MINES, AND COAL MINES, 1911-1929

Year	Quarries		Metal mines		Coal mines		Total, quarries and mines	
	Number of 300-day workers	Fatality rate per 1,000 300-day workers	Number of 300-day workers	Fatality rate per 1,000 300-day workers	Number of 300-day workers	Fatality rate per 1,000 300-day workers	Number of 300-day workers	Fatality rate per 1,000 300-day workers
1911.....	84,417	2.23	156,089	4.45	534,122	4.97	774,628	4.57
1912.....	93,837	2.27	161,662	4.09	541,997	4.46	797,496	4.13
1913.....	87,141	2.10	183,593	3.72	593,131	4.70	863,865	4.23
1914.....	68,187	2.64	142,619	3.92	526,598	4.66	737,404	4.33
1915.....	82,447	1.80	141,997	3.89	511,598	4.44	736,042	4.04
1916.....	76,457	2.26	192,455	3.62	565,766	3.93	834,678	3.71
1917.....	71,525	1.83	192,085	4.44	634,666	4.25	898,276	4.10
1918.....	59,285	2.11	181,006	3.57	654,973	3.94	895,264	3.74
1919.....	63,794	1.93	134,871	3.47	542,217	4.27	740,882	3.93
1920.....	77,089	2.31	134,540	3.16	601,283	3.78	812,912	3.54
1921.....	59,958	2.00	74,510	3.09	474,529	4.20	608,997	3.85
1922.....	68,861	1.92	97,138	3.54	405,056	4.89	571,055	4.30
1923.....	85,153	1.68	121,866	3.01	560,646	4.38	767,665	3.87
1924.....	84,426	1.63	119,113	3.51	499,896	4.79	703,435	4.20
1925.....	83,487	1.78	123,908	2.99	480,227	4.65	687,622	4.01
1926.....	82,361	1.87	123,776	3.47	559,426	4.50	765,563	4.05
1927.....	82,609	1.63	113,447	3.10	503,065	4.43	699,121	3.89
1928.....	81,325	1.46	109,345	2.50	468,680	4.64	659,350	3.89
1929.....	76,559	1.65	115,394	3.03	481,545	4.54	673,498	3.95

Building-Construction Accidents in New York City

THE Building Trades Employers' Association of the City of New York has recently published a report showing the activities of its accident committee since its organization in 1927.¹

According to tables in the report, covering the number and cost of compensated cases in the State of New York for all industries, for the construction industry, and for building erection and demolition, during a 5-year period, 1926-1930, a constant increase, both in number and severity, is shown during the last three years.

Data compiled from annual reports of members of the association present a different trend. Table 1, which contains data from the records of the entire reporting membership for 1930, with available rates for 1928 and 1929, shows a 14 per cent reduction for frequency rates in 1930, as compared with 1928, and a 33 per cent reduction in severity rates. Table 2, which covers the experience of identical firms reporting for each of the three years and consequently is strictly comparable, shows reductions in 1930, as compared with 1928, of 1 per cent in frequency and 15 per cent in severity.

Evidence of further economic benefit of the accident-prevention work is presented in the statement that, through the merit-rating system prevailing in the State, many members have obtained credit ratings in compensation insurance rates in excess of 50 per cent, one subcontractor reporting a 55.8 per cent credit which amounted to a saving of \$22,000 in insurance premium for the year 1930.

TABLE 1.—ACCIDENT FREQUENCY AND SEVERITY RATES IN BUILDING CONSTRUCTION IN NEW YORK CITY, 1928-1930

Trade group	Average number of employees, 1930	Frequency rates (per 1,000,000 man-hours' exposure)			Severity rates (per 1,000 man-hours' exposure)		
		1928	1929	1930	1928	1929	1930
Allied Building Metal Industries.....	1,461	56.06	35.78	38.56	3.65	0.77	2.00
Asbestos Contractors' Association.....	333			55.99			1.29
Carpenters' Association, Master.....	428	34.88	38.03	41.69	1.17	7.16	1.28
Cement Workers, Masters' League of.....	616	131.92	102.79	107.72	9.33	13.24	18.05
Composition Roofers and Waterproofers.....	259	36.18	37.69	94.03	.88	.57	1.65
Cut Stone Contractors' Association.....	522	20.26	30.03	18.58	.26	1.09	.22
Elevator Manufacturers' Association.....	1,438	70.80	55.07	85.93	13.44	7.83	12.00
General Contractors.....	6,463	59.66	59.63	42.53	6.22	5.17	3.62
Glass Association, The Stained and Leaded.....	42		.00	.00		.00	.00
Glass Dealers' Association, The Window and Plate.....	89		32.29	38.60		.79	.85
Heating and Piping Contractors.....	1,534	27.25	22.88	12.92	.40	.58	.15
Kitchen Equipment Industry.....	237		26.60	19.34		.07	.64
Lighting Fixture Manufacturers' Council.....	805		9.20	10.73		.68	.20
Marble Industry Employers' Association.....	1,147	21.31	20.02	16.64	9.85	.30	5.60
Metal Door and Window Association.....	162	28.78	35.19	5.93	.58	.32	.23
Metallic Furring and Lathing Association.....	166	21.05	35.75	32.18	.10	.18	.51
Mosaic and Terrazzo Employers' Association.....	30		8.65	.00		.18	.00
Painters and Decorators, Association of Master.....	651	22.84	21.51	14.33	8.36	1.23	1.26
Parquet Flooring Association of Brooklyn.....	15			.00			.00
Parquet Flooring Association of New York.....	110		5.26	5.06		.14	.01
Plasterers' Association, Contracting.....	546	27.04	35.83	64.48	10.94	5.00	6.35
Plumbers (Division No. 1), Association of Master.....	1,144	48.58	24.53	60.70	.49	.56	1.27
Refrigerator Manufacturers' Association.....	84		13.17	11.46		.55	.34
Rigging Contractors' Association.....	16		12.12	27.81		1.30	4.17
Roofers and Sheet Metal Workers.....	542	13.70	37.78	40.23	5.75	.90	5.89
Stone Setters Association, Contracting.....	181		31.57	149.89		.60	17.08
Tile Contractors' Association.....	269		34.43	23.70		.38	.58
Individual members.....	393	29.93	43.48	55.44	3.51	3.68	2.33
All groups.....	19,683	49.67	42.36	42.50	5.74	3.49	3.82

¹ Building Trades Employers' Association of the City of New York. Committee on Accident Prevention. Facts on industrial accidents. 1931 edition.

Table 1 contains information from 310 firms in 28 different trade groups, with 19,683 employees in 1930, who worked 39,456,552 man-hours. The frequency rate for 1930 is 42.50, which, while higher than 1929, is lower than 1928 by 14 per cent. The severity rate for 1930 is 3.82 which, while higher than 1929, is lower than 1928 by 33 per cent. In 25 different trades, 141 firms with 2,802 employees working 5,673,274 man-hours, completed the year 1930 without a lost-time accident.

Table 2 contains information concerning 123 firms in 15 different trade groups, with 12,241 employees, who worked 24,184,801 man-hours, in 1928; 10,906 employees, who worked 22,944,676 man-hours, in 1929; and 9,591 employees, who worked 19,292,941 man-hours, in 1930. These firms furnished reports for all three years. The frequency rate for 1930 is 48.87, as against 49.41 for 1928, a reduction of 1 per cent. The severity rate for 1930 is 5.54, as against 6.52 for 1928, a reduction of 15 per cent. Twenty-one of these firms, in 10 different trade groups, with 1,164 employees in 1930, working 2,163,036 man-hours, completed the three years without a lost-time accident.

TABLE 2.—ACCIDENT FREQUENCY AND SEVERITY RATES IN BUILDING CONSTRUCTION IN NEW YORK CITY, FOR FIRMS REPORTING FOR ALL 3 YEARS, 1928, 1929, AND 1930

Trade group	Average number of employees, 1930	Frequency rates (per 1,000,000 man-hours' exposure)			Severity rates (per 1,000 man-hours' exposure)		
		1923	1929	1930	1923	1929	1930
Allied Building Metal Industries.....	864	59.71	33.79	45.08	4.71	0.47	2.00
Carpenters' Association, Master.....	217	45.44	51.38	58.38	1.24	13.97	2.29
Cement Workers, Masters' League of.....	470	129.57	85.40	120.14	2.04	15.77	23.35
Composition Roofers and Waterproofers.....	123	35.03	46.59	25.85	1.06	.95	.36
Cut Stone Contractors' Association.....	315	20.26	30.41	16.78	.26	1.27	.20
Elevator Manufacturers' Association.....	1,109	73.72	54.79	72.10	14.19	8.95	12.71
General Contractors.....	3,763	59.86	69.47	48.42	6.91	7.28	4.79
Heating and Piping Contractors.....	226	29.78	33.27	23.01	.26	.69	.26
Marble Industry Employers' Association.....	949	20.90	18.78	16.54	11.59	.31	6.57
Metallic Furring and Lathing Association.....	114	21.05	27.47	29.41	.10	.05	.60
Painters and Decorators, Association of Master.....	186	34.05	28.00	19.03	19.58	2.20	3.45
Plasterers' Association, Contracting.....	378	30.66	33.21	64.10	12.41	.41	.76
Plumbers (Division No. 1), Association of Master.....	372	40.44	18.74	33.93	.48	.31	.39
Roofers and Sheet Metal Workers.....	180	11.48	32.42	41.15	13.97	.85	.33
Individual members.....	325	26.86	45.66	63.44	1.50	4.58	2.77
All groups.....	9,591	49.41	47.94	48.87	6.52	4.87	5.54

¹ Average number of employees in 1923, 12,241.

² Average number of employees in 1929, 10,906.

Industrial Accidents in France in 1929

THE number of industrial accidents occurring in France in 1929 was reported in the Bulletin du Travail, January-March, 1931 (pp. 34-36), published by the French Ministry of Labor. The law requires the reporting of all accidents lasting more than four days, and the data cover all industries with the exception of mines. The figures given in the following table relate only to the number of accidents and do not show the total number of employees nor the exposure in man-hours.

TABLE 1.—NUMBER OF INDUSTRIAL ACCIDENTS IN FRANCE, LASTING MORE THAN FOUR DAYS, 1929

Industry	Number of cases of—				Total
	Death	Perma- nent dis- ability	Tempo- rary dis- ability lasting more than 4 days	Results un- known	
Fishing.....			146		146
Forestry, agriculture.....	274	689	40,439	351	41,753
Extractive.....	26	14	2,273	3	2,316
Food.....	74	305	44,809	282	45,470
Chemical.....	111	250	47,885	187	48,433
Rubber, paper, pasteboard.....	35	238	17,700	86	18,059
Book.....	7	96	7,271	90	7,464
Textile manufacturing.....	43	585	61,614	194	62,436
Clothing.....	12	59	8,825	318	9,214
Straw, leather, horsehair.....		4	905	2	911
Hides and skins.....	12	121	13,489	87	13,709
Woodworking.....	76	1,044	53,073	350	54,543
Smelting and refining.....	136	340	62,061	273	62,810
Metal manufacturing (ordinary metals).....	220	1,918	283,729	1,874	287,741
Metal manufacturing (fine metals).....	2	12	1,289	18	1,321
Cutting precious stones.....		1	166	2	169
Stone cutting and grinding.....	4	25	3,959	28	4,016
Earthwork, stone construction.....	609	735	136,380	935	138,659
Stone and tile work.....	57	204	33,887	141	34,259
Warehousing.....	45	98	33,212	105	33,460
Transportation.....	420	397	74,209	363	75,359
Commerce.....	154	349	70,433	667	71,603
Peddling, theaters, agencies, etc.....	10	8	1,038	16	1,072
Banks, insurance, etc.....	9	6	1,051	131	1,197
Liberal professions.....	6	17	1,673	23	1,719
Personal service, domestic service.....	29	146	12,867	124	13,166
Service of the State, departments and communes.....	70	115	16,198	146	16,529
Total.....	2,441	7,776	1,030,581	6,796	1,047,594

Table 2 shows the number of accidents of different degrees of severity, grouped according to age and sex:

TABLE 2.—NUMBER OF INDUSTRIAL ACCIDENTS IN FRANCE, IN 1929, BY RESULT, AGE, AND SEX

Accidents resulting in—	Young persons under 18 years of age		Women	Men	Total
	Boys	Girls			
Death.....	98	12	69	2,262	2,441
Permanent disability.....	506	146	1,005	6,119	7,776
Temporary disability lasting more than 4 days.....	65,751	16,983	85,463	862,384	1,030,581
Results unknown.....	441	201	1,031	5,123	6,796
Total.....	66,796	17,342	87,568	875,888	1,047,594

HEALTH AND INDUSTRIAL HYGIENE

Test of a New Dust Eliminator

AN ACCOUNT of a test of a new dust eliminator to be used in rock drilling is given in the Industrial Bulletin, June, 1931, published by the Industrial Commissioner of New York State. The test was made under the joint auspices of the State Department of Labor, Metropolitan Life Insurance Co., Harvard School of Public Health, and the George J. Atwell Corporation, one of whose engineers is the inventor of the device. The test was carried out in the rock formation at Fourth Avenue and Twenty-fourth Street, New York City, where the Metropolitan Life Insurance Co. is excavating for a new building.

As silicosis has been an increasingly important hazard in New York City, owing to the large amount of excavation which is being carried on at all times, a committee was appointed by Miss Frances Perkins, State industrial commissioner, in 1929, for the purpose of making a scientific study of the subject. The invention of the dust eliminator is the outgrowth of the work of this committee. In commenting on the test, Commissioner Perkins stated that silicosis is a prevailing disease among a certain class of workers in New York, and that no other place except perhaps the diamond mines of South Africa has so great a silicosis hazard. The rock formations in New York and the vicinity contain varying amounts of silica, samples taken from eight localities in Manhattan where excavating was being done showing a total silica content varying from 56 per cent to 94 per cent, and a free silica content ranging from 1 per cent to 84 per cent.

The new machine is planned to remove the dust of 60 drills at one time and represents the first attempt to reduce the rock dust hazard by suction, masks and wet drilling having previously been the methods of protection used. The device has a metal hood through which the drill passes and the dust caused by the bite of the drill is sucked through a pipe into metal reservoirs where it is settled by water sprays and is washed away with the water. The machine not only protects the workers from the inhalation of dust, but is also a measure of economy, as it allows the operation of the drills at full power instead of the reduced power which is necessitated without the eliminator on account of the great amount of dust created. Experimental tests have shown that with the use of the dust-eliminating machine not more than 4 per cent of the silica dust remains in the air, which is not enough to create a hazard for the workers. If the new system proves to be fully successful, the industrial code bureau of the State department of labor will make a new code requiring the use of a similar device on all rock-drilling operations.

LABOR LAWS AND COURT DECISIONS

Statutes of Another State are Enforced Only by Comity

A NEGLIGENT act committed in one State, resulting in death, is not actionable in another State on the basis of the statutory laws of the former State unless the local statutes are substantially similar to those on which the action is based, according to a recent decision of the Court of Appeals of Maryland. (*London Guarantee & Accident Co. (Ltd.) v. Balgowan S. S. Co. (Ltd.)*, 155 Atl. 334.)

The facts of the case disclose that in November, 1928, Davis Hawkins was employed by the Gulf Stevedoring Co. at Galveston, Tex., in loading bales of cotton on the steamship *Balgowan*, which was owned by the Balgowan Steamship Co. In the course of his work he received injuries, due to the negligence of the steamship company, which caused his death. Compensation under the workmen's compensation law of Texas, in the sum of \$5,500, was awarded to the widow and children of Hawkins and was paid by the London Guarantee & Accident Co. (Ltd.), the insurance carrier for the Gulf Stevedoring Co. Thereupon the insurance carrier filed suit for damages against the steamship company in the superior court of Baltimore City, Md. From its adverse decision the insurance carrier appealed to the Court of Appeals of Maryland, contending that the right of action given it by the Texas statutes was actionable in the courts of Maryland.

In regard to this right the Court of Appeals said:

Inherently no State statute has any extraterritorial force, and is administered in a foreign State as a matter of grace, not of right, upon principles of comity. [Cases cited.] And there seems to be no sound reason why any State should lend the use of its judicial machinery for the enforcement of rights created by foreign statutes or laws in favor of nonresidents, unless by its own laws and statutes similar in substance to the foreign laws and statutes like rights are granted to its own citizens.

In this case plaintiff's claim is based not only upon the death statute of Texas (title 77, Rev. Civ. Stat. of Texas), but also upon the workmen's compensation law of that State (title 130, Rev. Civ. Stat. of Texas, and its limitations statute, title 91, Rev. Civ. Stat. of Texas), so that it becomes necessary not only to compare title 77 and title 91 of the Texas statutes with article 67, Maryland Code, but also to compare title 130 of the Texas statute with article 101 of the Maryland Code.

Comparing the relevant statutes of the two States, the court found that in important particulars the Maryland statutes differ from the Texas statutes, and the court said "the conclusion is manifest that those differences are of such a character that the Texas statutes will not be administered in the courts of this State."

In pointing out the differences between the workmen's compensation laws of the two States, the court said:

The important differences between these provisions of those two statutes is, first, that under the Texas statute no settlement of any action brought to enforce the defendant's liability can be made without the approval of the Texas Industrial Acci-

dent Board, while under the Maryland act such litigation may be settled, adjusted, or compromised at any time by the parties; second, under the Texas act, such an action may be brought to enforce such liability only by the insurer, and neither the injured employee nor his dependents can enforce it, nor can they compel the insurer to do so, while under the Maryland statute the liability may be enforced by the employer or the insurer, or, if they or either of them fail to act within two months after the award, by the employee, or, in the event of his death, his dependents.

By the subrogation provision of the workman's [sic] compensation law of Texas the right to enforce the liability of a person other than the employer whose wrongful act caused injury to an employee entitled to compensation under that act under circumstances creating a liability to pay damages in respect thereof is given to the insurer, while under the Maryland statute that right is given first to the insurer, and then, in the event of his failure to exercise it, to the injured employee, or, in case of death, to his dependents.

Under the Texas workman's compensation law, there can be no adjustment or compromise of the liability without the approval of the Texas Industrial Accident Board, while under the Maryland statute that right is in the parties interested.

These and other differences to which reference has been made indicate a dissimilarity in the relevant statutes of the two States so important and substantial that under the rule stated in *Ash v. Baltimore & O. R. Co.* (19 Atl. 643), and *Dronenburg v. Harris* (71 Atl. 81), no principle of comity could justify the courts of this State in administering the Texas statutes.

The judgment of the lower court was therefore affirmed.

Injury Held Not Compensable Unless Risk Is Contemplated by Employment Agreement

AN INJURY does not "arise out of employment" within the compensation act when the risk is not one fairly contemplated by the agreement of employment, according to a recent decision of the Supreme Judicial Court of Massachusetts. (*Eifler's Case*, 176 N. E. 529.)

Catherine J. Eifler filed a petition with the Industrial Accident Board of Massachusetts to recover compensation for the death of Henry Eifler, her husband. The deceased employee, while working as a garbage collector, was riding in a truck operated by the employer's chauffeur. The truck was proceeding at the rate of 3½ miles an hour when the employee attempted to alight. In so doing he fell and was run over by the truck, sustaining an injury resulting in his death. A hearing was held before a single member of the board, who found that "the employee did not fall from the truck while waiting for it to come to a stop, but was in the act of alighting from it when it was in motion and while doing so he fell and was run over." The industrial accident board granted an award and the Suffolk County superior court rendered a decree in favor of the claimant. The insurer thereupon appealed the case to the Supreme Judicial Court of Massachusetts. The question involved on appeal was whether the injury arose out of the employment or was incidental to it. The insurer contended that, as the risk was not contemplated by the contract of employment, it did not arise out of the employment.

At the trial the operator of the truck testified that his "custom was to come to a dead stop and let the men off. * * * He was going to stop on this particular morning; he had the foot brake partially on and the emergency brake partially on."

The evidence and the finding of the single member was reviewed by the court and a decision rendered in favor of the insurance carrier. The court said:

If an employee voluntarily incurs a risk not contemplated by his contract of employment, or incidental to it, he is not within the protection of the workmen's compensation act (Gen. L., c. 152 as amended). The purpose of the act is to compensate employees for injuries arising out of and in the course of their employment. But an injury does not arise out of an employment when the risk is one not fairly contemplated by the agreement of employment. If an employee goes outside the scope of his employment and incurs a danger of his own choosing and one altogether outside of any reasonable exercise of this employment, he can not recover. There are numerous cases which uphold this principle. [Cases cited.] In *Wither's case*, 252 Mass. 415, 147 N. E. 831, the employee was injured in attempting to board a moving railroad train. It was held that he could not recover. In that case it was said, at page 418 of 252 Mass., 147 N. E. 831, 832: "The claimant voluntarily incurred an added peril not within the contemplation of his contract of service." On the findings of the single member, in the case at bar, which were adopted by the industrial accident board, the employee "attempted to alight from the truck," "he was in the act of alighting." In doing this he voluntarily assumed an added peril which was no part of his employment.

Injunction Held Not Warranted Unless Acts of Union are Unlawful

THE Court of Errors and Appeals of New Jersey recently held that an injunction is not warranted in an employer's action against a labor union if the facts disclose no unlawful acts of the union and show that the combination of employees was for their mutual protection and economic welfare. (*Bayer v. Brotherhood of Painters, Decorators and Paperhangers of America, Local 301, et al.*, 154 Atl. 759.)

The suit in question was instigated by Andrew Bayer, a painting contractor operating in the vicinity of the city of Trenton, against the Brotherhood of Painters, Decorators and Paperhangers of America. The difficulty arose over the alleged activity of the contractor in encouraging the use of machines instead of manual labor to apply paint, which practice the union regarded as inimical to its members' economic welfare. The contractor denied that he used such machines in his own business, but admitted that he advanced money for the purchase of such a machine for a corporation in which he was a stockholder and that that corporation used such machines. He applied for an injunction restraining the union from placing him on the unfair list; from attempting to collect fines from his employees; from doing anything whatsoever to keep union men from working for him; from injuring his business in any way; from encouraging sympathetic strikes; and from persuading others to refrain from working for him.

The vice chancellor found that the union had, among other things, by threats of fine or discipline kept others who were willing and desirous of working for Bayer from so doing. He further found that it was not against the by-laws or rules of the union for an employer to own part interest in a paint-spraying machine and that the union was not justified in taking such action against the contractor. The order granting an injunction was issued, and the union thereupon appealed to the Court of Errors and Appeals of New Jersey, contending that the employees had a right to combine and by peaceable means refuse to work for an employer who does not conform to the rules of the

union and to persuade others to leave or refuse to enter such employment.

The court cited the act of 1883 (3 Comp. Stat. 1910, p. 3051, sec. 128), and the act of 1926 (Comp. Stat. Supp., sec. 107-131a), which grant the employees the right to form a union and to persuade others, by peaceable means, from entering the employment of any person or corporation. After reviewing the evidence, the court reversed the order of the court of chancery, saying in part as follows:

The court below appears to have concluded that efforts to persuade their members not to work or to discipline them for breaking the union rules was [sic] unlawful because the conduct of the complainant was not unlawful.

Nothing has been proved in this case to warrant a finding that the defendants have done or threatened anything that is not legalized by the acts of the legislature.

It seems clear from the statutes and the decisions of the courts of our own State, as well as of other jurisdictions, that employees may combine for their mutual protection; that they may for themselves conclude what acts and things are for their economic welfare; that they may enforce their demands by strikes, if they thereby violate no contracts of employment; that they may peaceably and without threats or intimidation induce others to do so, if no contractual rights are violated thereby. None of these acts is unlawful, and the fact that complainant may be affected unfavorably by the regulations of the union established to further their own interests does not render them unlawful.

Second Employer Held Not Liable for Enticement of Employee

THE Supreme Court of Tennessee held recently that a person hiring or enticing away an employee is not liable to the original employer if it is proven that the employee had sufficient cause for breaching the contract. (*Jordan v. Lewis*, 39 S. W. (2d) 743.)

B. F. Lewis filed an action against W. H. Jordan to recover damages for the hiring and enticing away of one of his employees. The suit was based on the alleged violation of the following sections of Thompson's Shannon's Code of Tennessee, 1918:

4337. It shall not be lawful for any person in this State, knowingly, to hire, contract with, decoy or entice away, directly or indirectly, any one, male or female, who is at the time under contract or under the employ of another; and any person so under contract or employ of another, leaving their employ without good and sufficient cause, before the expiration of the time for which they were employed, shall forfeit to the employer all sums due for service already rendered, and be liable for such other damages the employer may reasonably sustain by such violation of contract.

4338. Any person violating the provisions of the first clause of the last section shall be liable to the party who originally had and was entitled to the services of said employee, by virtue of a previous contract, for such damages as he may reasonably sustain by the loss of the labor of said employee; and he shall also be liable for such damages, whether he had knowledge of an existing contract or not, if he fails or refuses to discharge the person so hired, or to pay such damages as the original employer may claim, after he has been notified that the person is under contract, or has violated the contract with another person, which amount shall be ascertained, and the collection enforced by action for damages before any justice of the peace of said county where said violation occurs, or the party violating said section may reside.

A judgment was awarded Lewis, and later Jordan appealed to the court of appeals from a judgment against him in the circuit court, which judgment was affirmed. Thereupon the case was carried to the Supreme Court of Tennessee. Jordan complained that the lower

court had excluded testimony that the employee hired by him after he had contracted to work for Lewis in 1927, had abandoned his contract for cause; and that the court was in error in charging the measure of damages to be the reasonable rental value of the lands which the employee had contracted to work. The jury should have been instructed, Jordan averred, that it was the duty of the original employer to have minimized his damages, as he might reasonably have done, either by working the land himself or by procuring a substitute renter.

The view of the trial court, concurred in by the court of appeals, appeared to be that "evidence tending to show that the employee had abandoned his contract with good and sufficient cause, was available only to the defendant employee in a suit between the original employer and the employee, and was incompetent in an action brought by the original employer against the subsequent employer."

The Tennessee Supreme Court did not concur in this view, however, and in interpreting the two sections cited above, said:

While it is true that this defense is expressly provided for only in section 4337, which deals with the remedy in an action brought by the original employer against the employee, leaving his employ "without good and sufficient cause," and while the following section 4338 defines the liability and sets forth the remedy against the subsequent employer, the two sections are parts of one act closely related, referring one to the other, and we are of opinion, both upon a fair construction of the act as a whole and upon reason and principle, that it was not the intention of the Legislature to make a subsequent employer absolutely liable, despite a reasonably established showing that the employee had left his former employer for "good and sufficient cause." We think it obvious that it was not the legislative intent to excuse the employee from liability to his former employer on these reasonable grounds, and yet deny to the subsequent employer the right to prove and rely on the same grounds. A contrary view would be subversive of fundamental principles of contractual rights.

The court also said there was error in the instructions with respect to the measure of damages and that it should be modified upon another trial.

The judgment of the court of appeals was therefore reversed.

WORKMEN'S COMPENSATION

Recent Compensation Reports

Indiana

THE annual report of the Industrial Board of the State of Indiana for the fiscal year ending September 30, 1930, shows that 31,818 injuries were reported during the year as causing absence from work for more than one day, or 9,113 fewer than were reported for the previous year. Of these, 184 were fatalities and 535 were mutilations. The largest number of injuries for any group under the industry classification falls to general contractors, charged with 2,389 injuries, including 11 fatalities; this group was followed closely by coal mining, which reported 2,303 injuries, of which 17 were fatal. The manufacture of iron and steel experienced a heavy fatality, as 19 of the 668 accidents were fatal. Among the injuries were 1,815 to women and 155 to children 16 years of age or under.

Several tabulations are also presented covering the yearly experience under the workmen's compensation act since it became effective on September 1, 1915. Part of this is given in the following table, which contains the number of injuries causing death, the total number of injuries reported, and the amount of compensation paid in closed cases. "Closed cases" in this State means cases in which the compensation period has expired or in which the full compensation has been discharged in lump-sum settlements.

FATAL AND TOTAL INJURIES REPORTED AND COMPENSATION PAID IN CLOSED CASES, SEPTEMBER 1, 1915, TO SEPTEMBER 30, 1930

Fiscal year ending Sep- tember 30—	Injuries reported		Compensation benefits ¹	Fiscal year ending Sep- tember 30—	Injuries reported		Compensation benefits ¹
	Fatal	Total			Fatal	Total	
1916 ²	268	39, 672	\$267, 401. 03	1925.....	307	49, 170	\$2, 806, 615. 22
1917.....	305	41, 932	582, 435. 85	1926.....	265	43, 138	2, 862, 875. 82
1918.....	373	37, 520	914, 426. 86	1927.....	266	40, 539	2, 706, 886. 95
1919.....	268	35, 229	1, 090, 737. 83	1928.....	204	37, 714	2, 670, 883. 47
1920.....	291	42, 994	1, 186, 303. 60	1929.....	200	40, 931	3, 010, 530. 20
1921.....	263	34, 396	1, 790, 141. 96	1930.....	184	31, 818	3, 260, 716. 42
1922.....	198	38, 604	2, 350, 055. 90	Total....	3, 934	617, 511	\$ 30, 529, 613. 24
1923.....	268	54, 850	2, 261, 602. 65				
1924.....	274	49, 004	2, 368, 599. 48				

¹ Medical benefits not included.

² 13 months ending September 30.

³ Includes burial benefits in 3,934 cases, at \$100 each.

Kentucky

ACCORDING to a summary in the fourteenth annual report of the Kentucky Workmen's Compensation Board, for the year ending June 30, 1930, a total of 20,758 accidents was reported during that

period, or 1,393 more than during the previous year. Coal mining, as usual, was responsible for the largest group of accidents, with 7,952 for the year of the report, against 7,715 for the preceding 12 months. Fatalities numbered 154, or 7 per cent more than for the previous year. Slightly more than 1 per cent (287) of the injured persons were females.

During the period covered by the report, 15,049 agreements were approved, involving payment of \$1,315,061 in compensation. Other awards by the board to injured employees and dependents of deceased employees amounted to \$343,813, making the total awards \$1,658,873, of which \$831,896 was for accidents in the coal-mining industry. These figures do not include the expenses of medical, surgical, and hospital treatments provided by law.

During the year 1,172 employers elected to operate under the provisions of the compensation act, bringing the total number of employers who have accepted the act since it became effective (1916) up to June 30, 1930, to 18,304, subject to deductions for withdrawals, discontinuance of business, or removal from the State.

The report includes data on the classification of agreements and amount of compensation, by extent of disability and by industry.

Ohio

A STATEMENT issued by the Industrial Commission of Ohio announces a revision of premium rates for workmen's compensation insurance written by the State insurance fund, with an increase of approximately 10 per cent in the average basic rate level, effective July 1, 1931. Some classification rates have not been increased, while others have been reduced due to the favorable trend of accident experience.

It is explained that the increase was found necessary because of the increased benefits established by amendment to the law; the trend toward increasing medical costs; the increasing liberality in the interpretation of the law by the courts on appealed cases previously disallowed by the commission; the decreasing wage levels, resulting in lower pay roll and premium without a corresponding reduction in claim cost; and the failure of employers to pay advance premiums, so that the fund is required to pay claims of injured employees and of dependents of killed employees but is often unable to collect such losses from the employers on account of insolvency or other causes.

The revision carries increases in 257 classifications (43.5 per cent), decreases in 58 (10 per cent), and no change in 274 (46.5 per cent). The occupational disease rate remains the same, 1 cent per \$100 of pay roll.

The actuary's report of the condition of the State insurance fund as of December 31, 1930, which is included, shows assets of \$52,840,925 and a surplus of \$2,117,962. Receipts for the year 1930, including premiums and interest on reserve funds, totaled \$14,004,756, while the total disbursements for the year were \$16,165,030, making an excess of disbursements over receipts of \$2,160,274.

The commission states that it is natural to expect this condition to develop, as a period of general depression immediately affects the entire premium income, due to lower pay rolls, while disbursements

are only slightly affected, due to the payment of benefits over a long period of time in many cases. Depression also has a tendency to develop conditions that serve to increase disbursements, such as giving previously injured workers, who had been able to resume employment in a more or less crippled condition but are unable to obtain employment during the depression, an opportunity to make claim for the remaining compensation due them as a result of their injury. It is also found that physicians, hospitals, etc., have time during depressions in which to check up their records and file bills for services rendered during periods of high industrial activity but hitherto overlooked. This condition has been recognized and funds have been provided in the claim reserve to meet it, to avoid increase of premiums for that purpose during periods of depression.

The commission reports decreases from 1929 to 1930 of 12.4 per cent in pay roll, of 17.6 in number of claims filed, and of 16.2 per cent in premium receipts, indicating a general decrease in claim frequency per unit of pay roll. Medical awards decreased 14.3 per cent from those of 1929, indicating a continued increase in medical, hospital, and nursing cost per claim, as compensation awards showed a decrease in conformity with claims filed.

Oklahoma

THE report of the Industrial Commission of Oklahoma for the calendar year 1930, consists of monthly statistical reports of injuries reported, disposal of claims, amount of compensation and medical awards, and location of injuries.

The following summary table, prepared from the data in these reports, shows the number of injuries reported, the number of awards made, and the amount of benefits awarded during the year, by months.

INJURIES REPORTED AND BENEFITS AWARDED IN OKLAHOMA, 1930, BY MONTHS

Month	Number of injuries reported	Number of awards			Amount of awards		
		Compensation	Medical aid	Total	Compensation	Medical aid	Total
January.....	4,171	553	7	560	\$160,663.30	\$402.50	\$161,065.80
February.....	3,977	879	7	886	182,646.66	623.00	183,269.66
March.....	4,551	943	9	952	244,703.49	1,347.00	246,050.49
April.....	4,386	948	11	959	251,506.80	1,038.20	252,545.00
May.....	4,727	1,346	6	1,352	332,293.41	506.75	332,800.16
June.....	4,698	1,338	1	1,339	272,745.69	116.00	272,861.69
July.....	5,109	1,261	5	1,266	283,513.72	807.60	284,321.32
August.....	5,691	1,013	10	1,023	257,976.35	780.75	258,757.10
September.....	5,109	1,372	2	1,374	234,629.97	47.50	234,677.47
October.....	4,604	1,453	0	1,453	329,194.55	0	329,194.55
November.....	3,836	1,355	8	1,363	282,911.95	483.00	283,394.95
December.....	3,298	1,463	4	1,467	339,454.13	185.00	339,639.13
Total.....	54,157	13,924	70	13,994	3,172,240.02	6,337.30	3,178,577.32

Rhode Island

THE report of the Commissioner of Labor of Rhode Island for the year 1930 covers the various activities of the department of labor, including the operation of the workmen's compensation act.

Several legislative changes are advocated in the workmen's compensation act and other labor laws. Statistical tables for the year present the experience of the insurance companies writing workmen's compensation insurance in the State; the experience of firms carrying their own risks; the number of accidents reported, by occupation, age, industry, and nature of injury; the amount of compensation paid, by class of injury; and the amount of time lost through injuries. It is explained that the data do not cover all accidents occurring in the State during the year, as only acceptors of the act are required to report accidents.

The following table gives some of the principal features of the data for the year ending September 30, 1930, compared with corresponding data from the previous report.

EXPERIENCE UNDER WORKMEN'S COMPENSATION ACT OF RHODE ISLAND, FISCAL YEARS ENDING SEPTEMBER 30, 1929 AND 1930

Item	Year ending—	
	September 30, 1929	September 30, 1930
Number of establishments under act.....	5, 031	4, 979
Wage earners covered ¹	140, 989	153, 018
Number of accidents reported:		
Fatal accidents.....	40	25
Nonfatal compensable accidents.....	4, 199	3, 608
Noncompensable accidents.....	28, 365	26, 234
Benefits paid for accidents occurring during year:		
Compensation, fatal cases.....	\$7, 289. 75	\$19, 571. 98
Compensation, nonfatal cases.....	281, 593. 31	284, 404. 59
Medical aid, compensable cases.....	224, 376. 22	165, 184. 50
Medical aid, noncompensable cases.....	198, 508. 17	148, 850. 04
Benefits paid for accidents occurring in previous years:		
Compensation, fatal cases.....	61, 597. 99	52, 712. 09
Compensation, nonfatal cases.....	230, 122. 11	239, 857. 03

¹ Partly estimated.

Wisconsin

THE fifteenth report of the Industrial Commission of Wisconsin on the administration of the workmen's compensation act, covers the 2-year period, July 1, 1928, to June 30, 1930. A summary of the number of cases reported and closed yearly since the act became effective, September 1, 1911, up to June 30, 1930, with amounts of benefits involved are given in the table following.

NUMBER OF CASES REPORTED, NUMBER SETTLED, AND BENEFITS PAID UNDER
WORKMEN'S COMPENSATION ACT OF WISCONSIN, SEPTEMBER 1, 1911, TO JUNE
30, 1930

Year ending June 30—	Number of cases reported	Number of com- pensable cases settled	Benefits paid in settled cases					
			Compensation		Medical aid		Total	
			Amount	Average per case	Amount	Average per case	Amount	Average per case
1912 ¹	1,332	846	\$42,400	\$50	\$17,950	\$21	\$60,350	\$71
1913	3,698	2,841	173,900	61	79,400	28	253,300	89
1914	10,127	8,496	581,200	68	270,000	32	851,200	100
1915	11,006	11,377	945,045	83	309,609	27	1,254,654	110
1916	16,015	12,848	938,774	73	277,415	22	1,216,189	95
1917	20,560	17,157	1,184,371	69	391,958	23	1,576,329	92
1918	19,361	15,825	1,278,383	81	427,085	27	1,705,468	108
1919	18,448	16,471	1,683,010	102	508,902	31	2,191,912	133
1920	18,441	14,445	1,567,072	108	473,433	33	2,040,505	141
1921	18,987	17,622	2,361,845	134	668,455	38	3,030,300	172
1922	16,685	15,852	2,252,138	134	707,836	42	2,959,974	176
1923	23,166	19,058	2,763,836	145	838,180	44	3,602,016	189
1924	25,196	22,393	2,803,249	125	1,059,480	47	3,862,729	172
1925	24,064	21,349	3,493,185	164	1,122,184	53	4,615,369	216
1926	26,322	21,084	3,493,290	166	1,131,602	54	4,624,892	219
1927	24,583	21,722	3,596,607	166	1,146,441	53	4,743,048	218
1928	26,052	21,199	3,591,138	169	1,165,599	55	4,756,737	224
1929	26,511	21,698	4,076,857	188	1,325,610	61	5,402,467	249
1930	25,920	22,514	4,664,865	207	1,522,169	68	6,187,034	275
Total	356,474	304,797	41,491,165	136	13,443,308	44	54,934,473	190

¹ Sept. 1, 1911, to June 30, 1912.

The table covers only cases in which the disability extends beyond seven days. All reports of such accidents or occupational diseases are counted under "cases reported," while only the compensable cases are accounted for under the heading "cases settled." The 356,474 cases reported include 42,028 which were not compensable, leaving 9,649 cases open at the close of the period.

Summaries of claims and awards for the two years reported on are also given in the report, and several pages are devoted to decisions of the commission during the biennium.

Manitoba

THE report of the Workmen's Compensation Board of Manitoba, Canada, for 1930, reviews the experience under the workmen's compensation act for the calendar year 1930, and presents a detailed analysis of the final accident record for 1929.

The total number of accidents reported to the board by the various groups of employers during 1929 and 1930 is as follows:

ACCIDENTS REPORTED IN MANITOBA IN 1929 AND 1930, BY EMPLOYING GROUPS

Group	Number of accidents	
	1929	1930
Steam railways	2,890	1,600
Province of Manitoba	156	246
City of Winnipeg	318	414
General body of employers	8,893	7,380
Winnipeg Electric Co.	142	129
Dominion Government	941	560
Total	13,340	10,329

The total figures show a decrease for 1930 of 22.6 per cent, and the board states that it is unable to say how far this decrease is due to a reduction in pay roll, as audited pay-roll returns for 1930 are not available, but that many industrial plants have shown considerable interest in safety work, and some results from this should be evident.

The decrease was most marked in the operation of steam railways, where the reduction amounted to 44.6 per cent, but the general body of employers, which was responsible for more than 70 per cent of all reported accidents during 1930, experienced a decrease of 17 per cent.

Fatal accidents showed an average decrease of 38.8 per cent for 1930 as compared with 1929, a total of 52 fatalities being reported for 1930 against 85 for 1929. The greatest decrease in fatalities occurred for the general body of employers, which reported 33 for 1930 against 61 for 1929, a reduction of 45.9 per cent.

Nova Scotia

THE report of the Workmen's Compensation Board of Nova Scotia presents a brief review of the experience under the workmen's compensation act of the Province since it became effective on January 1, 1917, a review of the experience for the year 1930, the 1930 experience of the provincial accident fund, and an analysis of the compensated accidents in 1929.

The total number of accidents reported to the board for 1930 was 9,434, or 771 fewer than in 1929. They consisted of 61 compensable and 5 noncompensable fatal accidents, 206 causing permanent partial disability, 6,113 causing total disability for seven days or more, 2,132 medical aid cases, 228 accidents pending adjustment, and 689 nonfatal noncompensable cases.

It is estimated that the total cost of compensation and of the medical aid furnished by the board for the 1930 accidents is nearly \$1,586,500. In two of the industrial groups—mining, and iron and steel—the greater portion of medical aid is provided under medical aid schemes, and is consequently not furnished by the board. The estimated amount does not include administration expense nor cost of safety associations, which would add nearly \$100,000.

The number of accidents compensated in 1930 is shown in the following table, by industry and by extent of disability.

NUMBER OF COMPENSATED INDUSTRIAL ACCIDENTS IN NOVA SCOTIA IN 1930
BY INDUSTRY AND EXTENT OF DISABILITY

Industry class	Cases closed				Cases partly closed	Total	
	Fatal	Perma- nent dis- ability	Temporary disability				Total
			Involv- ing com- pen- sa- tion	Involv- ing medi- cal aid			
Mining.....	22	97	2,328	248	2,695	263	2,958
Lumbering and woodworking.....	7	32	1,093	250	1,382	176	1,558
Iron and steel.....	3	12	222	363	600	28	628
Manufacturing and operating not otherwise specified.....	4	11	414	333	762	52	814
Building and construction.....	3	7	219	181	410	40	450
Public utilities.....	9	6	254	203	472	67	539
Transportation.....	4	31	630	510	1,175	117	1,292
Provincial highways department.....	2	2	124	20	148	31	179
Dominion government employees.....	1	7	236	16	260	59	319
Halifax relief commission.....	0	1	1	1	3	0	3
Total.....	55	206	5,521	2,125	7,907	1,833	9,740

¹ Includes 6 fatalities.

Extension of French Act on Occupational Diseases

A LAW was passed in France, dated January 1, 1931, which amended the law of October 2, 1919, extending the provisions of the workmen's compensation law to cover certain occupational diseases.¹

The earlier law provided that compensation should be paid only for cases of poisoning from lead or mercury, but a decree issued February 19, 1927, made the reporting of occupational diseases arising from the use of various poisonous substances compulsory, although compensation was not paid in such cases. The present law adds to the compensable diseases cases of occupational poisoning from tetra-chlorethane, white phosphorus, and benzol and the toxic conditions resulting from the action of X rays or the following radioactive substances: Uranium and its salts, uranium X, ionium, radium and its salts, radon, polonium, thorium, mesothorium, radiothorium, thorium X, thoron, and actinium.

A doctor's certificate, indicating the nature of the sickness and its probable results, must accompany the notification of the case. Two copies must be furnished the mayor, who immediately sends one copy to the employer of the sick worker and one to the departmental labor inspector or the mining engineer having supervision over the enterprise.

The special occupational disease committee of 35 members made up of senators, deputies, governmental officials, physicians, employers, and employees is instructed to give an opinion upon changes or additions to be made in the list of diseases subject to compensation and upon all questions of a medical and technical nature which are sent to it by the Minister of Labor.

The law was to become effective six months after its promulgation.

¹ France. Ministère du Travail et de la Prévoyance Sociale, Bulletin Jan.-Feb.-Mar. 1931, pp. 10*-15*.

COOPERATION

Development of Cooperation in Argentina

A REPORT from Robert W. Bliss, American consul at Buenos Aires, dated June 10, 1931, contains the following data on the development of the cooperative movement in that country.

The first cooperative venture was started in 1885 by a group of French socialist immigrants. Although this society was comparatively prosperous the first two years, it failed in 1887 because of excessive credit granted to the members. That same year a cooperative bakery was founded by a German group; this bakery failed about 1896, due to the same cause—too much credit. A third society started up in 1898, but had little success and failed five years later. However, another society, formed only two years later, in 1905, has become the most important cooperative association in Argentina.

The present development of the cooperative movement is largely agricultural, 139 of the 222 societies in operation in 1928–29 being farmers' societies of various types. The distribution of societies, by type, is shown below:

Consumers' societies.....	36
Industrial, druggist, etc.....	21
Electricity societies.....	4
Building societies.....	2
Credit societies.....	16
Rural insurance societies.....	4
Agricultural associations.....	139
Total.....	222

These 222 societies are reported as having a combined membership of 78,391 members, capital of 11,532,781 pesos (\$4,895,666)¹ and an annual business (not including insurance operations) of 84,406,164 pesos (\$35,830,417).

There are several federations of farmers' associations. One of these consists of societies of the Argentine Agricultural Federation and is composed of 20 societies with more than 2,000 members and a capital of 500,000 pesos (\$212,250). The most important of these federations is the Association of Argentine Cooperative Societies at Rosario, a federation of 57 societies with 8,601 members and capital of 2,133,924 pesos (\$905,851). This is a marketing organization which owns a number of grain elevators and is building a large new elevator at Rosario. Its sales of grain in 1930 amounted to 10,437,175 pesos (\$4,430,581).

¹ Conversions into United States currency on basis of peso=42.45 cents.

Rural Cooperative Credit in China

RURAL cooperative credit in China is the subject of an article in the *Quarterly Journal of Economics* for May, 1931, from which the following information was taken.

Much good has been done by the cooperative credit societies in India, where that phase of cooperation took root as early as 1900. The author points out the analogy, "so close as to be almost identical," between India and China, from the economic standpoint. Both have a "huge population overcrowding the land, great predominance of agriculture in the economy of the country, abject poverty of the masses of the people, poor credit organization with very high interest rates."

In India the cooperative credit movement has not only had official protection and encouragement but in the beginning it also had financial assistance. China has been without a stable government, and "probably because of civil strife" the question of rural cooperative credit received no real consideration until 1922, and then the attention came from a private philanthropic institution, the China International Famine Relief Commission.

The commission had been organized to meet the famine emergency of 1920-21. It came to the conclusion that preventive measures would be more effective, from a long-time standpoint, than purely remedial ones. The provision of cooperative credit for the farmers seemed to offer one solution.

After a comprehensive survey of Chinese rural economy, the commission became convinced that if loans could be extended to a cooperative credit society, secured on the individual and collective responsibility of the members, the cost of administration could be kept at a low figure and the interest rate could be greatly reduced. Eventually these credit societies could federate into unions, and the unions eventually into a central bank. Thus a national agricultural credit system could be built up which, in years when crops were poor in one section, could provide credit from the funds built up in other sections where the crop was abundant. Thus many of the local famines which now result in much suffering and even in loss of life could be prevented, "while the permanent prosperity of the rural population through the application of credit at reasonable rates would be greatly augmented."

The commission, in 1923, drew up a model constitution for a credit society, based on the Raiffeisen type. Under it the new society must have at least 12 members. Applicants for membership must be proposed by two members and must receive a favorable vote by at least three-fourths of the entire membership. Each member must subscribe for at least one share of noninterest-bearing stock, but has only one vote regardless of his holdings in the society. If he resigns he forfeits his stock. The society is permitted to make loans only to members and may not charge an interest rate higher than that current in the locality. Officers and committee members must serve without pay. Any profit realized is placed in the reserve fund and may not be distributed among the members. The society's liability is unlimited.

In order to be recognized by the commission (and become eligible for loans made by the central bank established by it), the credit society must conform to the principles laid down in the model constitution, and "must give satisfactory evidence of a thorough preparation."

It is explained that a good deal of preliminary work is required to win the farmers to the idea of cooperative effort. "Chinese farmers have been subject to exploitation by corrupt officials and unscrupulous tradesmen. It is therefore not surprising that they are suspicious of any new idea. To win their confidence, it is necessary that they understand the real nature of cooperation before a society is formed."

As far as possible the societies are constituted only as a result of local initiative. This is being supplied in many cases by persons who have participated in some of the early societies and have become enthusiasts over the idea. In some cases also the local school-teacher or preacher has become interested and is serving as a volunteer worker among the farmers of the community.

When a society is formed it may apply to the commission for guidance in the proper organization and practices, but before recognition is accorded the commission sends an agent to examine the society and call upon the charter members individually.

Among other things he seeks to learn (1) whether there is any deep-rooted ill-feeling existing among groups of residents in the community; (2) whether there are men of bad character in the society (often such persons are influential in the village, and without outside assistance it is difficult for a new society to refuse their application for membership); (3) whether there is at least one member who is literate and able to transact the paper business of the society. He also seeks all the information possible on the general economic and social conditions of the community. The governing committee of the Central Bank hears his report and decides whether or not recognition should be granted. If recognition is withheld the reasons are communicated to the applicant society. It will be seen that the process of forming a society is a tedious one. Often it requires a year or more. Although it was not so intended, this long period of incubation has tended to eliminate the unworthy.

In addition to the organization work, the commission has issued a number of publications on cooperation, and publishes a monthly paper. It has also, since 1925, carried on training courses for co-operators, in practical agriculture. In 1929 such courses were held in 9 centers, drawing a total attendance of 717 students, representing 334 societies.

Year by year the number of credit societies increases, but thus far the movement has developed mainly in the Province of Hopei. The development of the cooperative credit societies since the commission began its work is shown in the following table:

DEVELOPMENT OF COOPERATIVE CREDIT MOVEMENT IN CHINA, 1923 TO 1929

Year	Recognized societies		Nonrecognized societies		Total		Loans granted to recognized societies
	Number	Member-ship	Number	Member-ship	Number	Member-ship	
1923			8	256	8	256	
1924	9	403	2	47	11	450	\$3, 290
1925	44	1, 270	56	1, 062	100	2, 332	10, 450
1926	97	3, 288	220	4, 744	317	8, 032	32, 440
1927	129	4, 354	432	8, 836	561	13, 190	60, 795
1928	169	5, 624	435	9, 677	604	15, 301	89, 374
1929	246	7, 862	572	14, 072	818	21, 934	122, 414

Loans may be made to individual members only for the following purposes:

- (a) For seed, food, cultivation expenses, or cattle fodder.
- (b) For purchase of carts or cattle, liquidation of small debts, house building, purchase of implements, and equipment.
- (c) For purposes which will continue to be productive for several years, such as canals, dikes, irrigation, and drainage projects.
- (d) For necessary social obligations.
- (e) For home and village industries such as hand spinning, braiding, and brewing.

Loans for the purpose of paying off old debts bearing high interest rates form a considerable proportion of the loans made by these societies. Of 4,966 loans analyzed, 1,247, covering 23.8 per cent of the total amount loaned, were for the purpose of paying old debts.

The number and amount of loans renewed at the expiration of their term has steadily decreased during the past two years. The two chief factors which have made renewals necessary have been military disturbances in the district of the borrower and excessive remittance rates or interruption of remittance facilities. Loss by banditry forms another factor often making it impossible for the farmer to pay his loan when due.

The writer points out, however, that in spite of the fact that Hopei Province (where most of the societies are located) has been the scene of much civil strife, banditry, and even famine, during the past two years, there have been no losses by the societies because of bad debts.

The second step—the formation of federations of the local credit societies—was taken as early as 1925, when 10 societies in one district formed a central union. Since then eight others have been formed.

These unions give the members of the individual societies that feeling of solidarity which comes from association with large numbers. They tend to extend the scope of usefulness of the better-trained and more intelligent leaders in the individual societies by drawing these men into closer contact with other societies. The unions, too, have proved to be of marked value in connection with the training courses for cooperators. It is quite possible also that eventually, when the movement grows, the central bank will make loans only to the unions, and they in turn will reallocate the funds to their member societies. This will tend greatly to facilitate that decentralization of organization and supervision which will become essential with the growth of the capital funds of the central bank.

The farmers of other Provinces are also becoming interested and several private banks have become aware of the possibilities in this field.

The author is of the opinion that present conditions are not favorable for the formation of a central bank owned by the cooperatives themselves. "It is hardly probable that the urgent need of the war lords for funds would permit any central rural bank to flourish. While one group might undertake to grant aid to the movement in order to establish it, any real success would be a temptation to the confiscatory measures which are associated with civil wars in China, as elsewhere. And the frequent changes of administration which are now the rule would work a detriment quite apart from the imminent danger of withdrawal of the funds for military purposes."

As to the future of the cooperative credit movement, the writer comments as follows:

As has been said before, the experimental stage is by no means over, but the value of the cooperative societies has been so amply proven that we may confi-

It is not to be expected that rural cooperation has come to China to stay, whatever course its future may take. The idea of cooperation on any scientific basis was revolutionary in rural China, bred as the race has been on familism as the primary means of organization. With the experience gained in working together to secure cheaper credit, for putting savings to work instead of burying them in the fields, and to market more effectively their products, the farmers will find further spheres of usefulness in working together as a community instead of working against each other in different family units. Moreover, the societies, composed as they are of the most progressive, intelligent, and reliable men of the villages, will serve as the most effective channel through which modern ideas can be introduced.

Workers' Productive Societies in the Soviet Union

ACCORDING to a census taken in 1929-30 by the statistical department of the State Planning Commission of Russia, 60 per cent of the 7,481,700 industrial workers in that country are employed in small-scale industries.¹ In the same year these small industries produced 21.6 per cent of the total industrial output of Russia. In certain industries, however—such as the manufacture of textiles, food-stuffs, clothing, pottery, and small ironware, and wood—the proportion produced by the same industries rises much above this figure, accounting for as much as 90 per cent in some cases.

The majority (about 75 per cent) of workers in these handicraft industries live in rural areas and carry on farming operations also.

One characteristic of these "kustar" industries is their regional grouping. Industries tend to become localized; whole villages and sometimes even whole districts engage in the same branch of industry. This tendency is brought about by special local conditions, such as the presence of certain raw materials, the proximity of important markets or of factories supplying semimanufactured goods, local traditions of work, etc.

About 25 per cent of the workers in these small industries belong to cooperative societies, but in some places this proportion rises as high as 50 per cent.

These "kustar" societies take the following forms: (1) Workers' productive societies running a common workshop where the articles of production are made; (2) societies for the purchase of materials and marketing of product (but in which the members, as producers, work independently); (3) credit societies; and (4) societies partly artisan and partly agricultural in character.

On October 1, 1930, there were in the Soviet Union 18,363 kustar societies having 2,002,000 members, of whom about 46 per cent belonged to societies running cooperative factories or workshops. The output of these kustar societies in 1929-30 was valued at 2,500,000,000 rubles (\$1,286,500,000).²

The local societies are affiliated into 385 regional unions.

¹ Data are from International Labor Office. Cooperative Information, No. 7 (120), 1931.

² Conversions into United States currency on basis of ruble=51.46 cents

LABOR ORGANIZATIONS

Trade-Union Movement in India

THE report of the British Royal Commission on Labor in India, recently issued,¹ gives some space to a consideration of the trade-union movement in India, and to the attitude the Government and the employers should take toward unions.

Attempts to organize the mill workers of Bombay were made as early as the eighties of the last century, but these were unsuccessful, and up to the close of the war unions scarcely existed except among the better-paid railway workers and some classes of Government employees. But immediately after the war, the grave economic difficulties of the workers gave a strong impulse toward organization, and this was increased by the world-wide surge of labor consciousness, which extended even to India, and throughout the twenties organizations sprang up freely. In those days much of the opposition to the movement was directed toward the "outsiders," i. e., labor leaders drawn from outside the ranks of labor. Many employers declared their readiness to treat with their own employees, but refused to deal with outsiders. The question has not yet been entirely settled, but the right of unions to employ whom they choose as leaders has been legally recognized.

Legal Position of Unions

UP TO 1926 unions had no legal standing. The act of that year recognizes them as lawful organizations, and permits their registration subject to certain conditions, the most important of these being that they shall furnish audited accounts and that a majority of their executive officers shall be actual workers. Registration confers on the unions and their members a measure of immunity from civil suits and criminal prosecutions, but its greatest benefit is the improved status it gives through its legal recognition of their validity.

Strength of Movement

THE commission finds it difficult to assess fairly the strength of the trade-union movement, since the unions differ so widely in form and character. Some are little more than nominal organizations, designed to promote the purposes of one or two leading men who fill the offices and assemble the members, if any, only when it is desirable to secure the formal indorsement of some resolution. Others are unions formed for some specific purpose, often to win a strike, and these are apt to fall to pieces when their object is attained. Above these are permanent and regular organizations, trade-unions in the accepted sense. These are most numerous in the transport services, next among Government employees, with the printing industry standing third. Text-

¹ Great Britain. Royal Commission on Labor in India. Report. London, 1931. (Cmd. 3883.)

tile workers have been rather slow to organize, but have large unions now in Madras, in Ahmedabad and in Bombay. Mine workers are poorly organized in every field.

The actual number of workers covered by live organizations is doubtful. At the end of 1929 there were 87 registered unions with a membership of 183,000, but there are a number not registered. In December, 1929, the All-India trade-union congress claimed that the unions affiliated with it had a membership of 190,436, but this number included one large union whose figures were known to be questionable.

Hindrances to Organization

THE greatest obstacle to the growth of the trade-union movement is found in the character of the Indian workers. For the most part, they are migratory, which renders permanent organization difficult. Their wages are low and their hours long, so that few have either leisure or energy for serious effort beyond their daily toil, and the question of dues presents almost insuperable obstacles. More fundamental still is the absence of a democratic spirit, and the inability, due to lack of experience and education, to take a long view. The idea of paying dues continuously for the sake of some future benefit does not appeal to them.

Even if he were better off than he is, the Indian workman would not be easily persuaded to spend money which promised no obvious and immediate return. Few trade-unions can afford to conduct benevolent work, and the majority find it hard to convince the worker that a subscription is worth while except when a dispute is imminent or in progress.

Need for Unions

ON THE employer's side, there is the usual need of having some responsible organization with which to deal; on the employee's side, there is need for the kind of protection a well-organized and well-managed union gives. The commission calls attention to the fact that the industrialism which has been established in India is entirely foreign to the character of the people, and lacks the protective features which naturally develop in an indigenous system.

Everything that we have seen in India has forced upon us the conviction that the need of organization among Indian workmen is great, and that, unless industry and the State develop along entirely different lines from those at present followed, nothing but a strong trade-union movement will give the Indian workman adequate protection. Legislation can act as a palliative and prevent the graver abuses, but there are strict limitations to the power of government and the public to protect workmen who are unable to protect themselves. Labor laws, indeed, find one of their most effective sanctions in the support of organized unions. * * * It is in the power to combine that labor has the only effective safeguard against exploitation and the only lasting security against inhumane conditions.

Methods of Encouragement

THE most obvious way of encouraging unions is by recognizing them, and the commission makes clear its feeling that this should be more than a mere perfunctory gesture.

In our view recognition should mean that the employer recognizes the right of the union to negotiate with him in respect of matters affecting either the common or the individual interests of its members. * * * Recognition in the letter must be followed by recognition in the spirit, by a readiness to discuss sympathetically points put forward by the union, by accessibility to its officers and by will-

ingness to let them have credit where credit is due. * * * The employer who discriminates in the matter of promotion against union men, or in any other way tries to weaken the influence of the union he has recognized, is in no way better than the employer who denies recognition outright, and is as little likely to advance the cause of peace.

Refusal to deal with union officials who are "outsiders" is equally condemned. The workers have a right to choose their leaders, and in many cases the risk of victimization would keep an employee from presenting their case vigorously. Refusal to recognize unregistered unions stands on a different footing; the obligations imposed by registration are not such as any bona fide union should object to assuming, and the failure to register creates a suspicion as to the character of an organization.

The commission is strongly opposed to one method, intended to be helpful, which certain employers have adopted, i. e., the collection of dues for the union. "This has usually been done by deducting the union subscription from the workers' pay and handing the accumulated amounts over to the union officials month by month." It is pointed out that although the union often receives more in this way than it would be apt to in any other, that very fact shows that some of the subscriptions are being taken from men who do not wish to give them, which is a manifest injustice. Moreover, since the employer can at his option refuse to continue the practice, it makes the union unduly dependent upon his favor, and inevitably limits the vigor and aggressiveness of the union officials.

Need for Self-Reliance

PERHAPS the greatest need of the Indian trade-unions, the commission feels, is an increase in self-reliance; at present they are too much inclined to wait upon the employer's attitude. A training for leadership is one of the most important functions they can assume. At present, the unions are weak, and the few leaders have the choice of doing the work effectively themselves, or letting it be done ineffectively by their subordinates who have not the training and experience to do it well. Nevertheless, the commission feels that the latter alternative should be chosen, even at the risk of serious mistakes, and that every opportunity should be taken to train both the lower officials and the rank and file in the principles and practice of trade-unionism.

For this purpose, as well as for other reasons, a multiplication of the activities of the trade-unions is desirable. At present they are apt to limit themselves to merely industrial questions. The extension of the cooperative movement through the agency of the trade-union is suggested as a peculiarly suitable line of work. Welfare activities, adult education, and the collection and administration of benefit funds are mentioned as other lines along which they might secure excellent results and in the process train their members in working together.

Paid officials, developed from within the movement, are looked upon as necessary, and it is suggested that State funds might well be used to provide scholarships in universities or colleges which are ready to cooperate, in order that the officials may obtain a wider training and experience than their own means and occupations permit.

WORKERS' EDUCATION AND TRAINING

Utilization of Workers' Spare Time

AMONG the subjects taken up in the Annual Review of the International Labor Office for 1930 are workers' education and other activities connected with the utilization of workers' leisure time. The sections of the report relating to these two subjects are reproduced below.

Workers' Education

"THE workers' education movement, which has developed very strongly during the past few years, led to certain significant international meetings in 1930.

"At the end of April the congress of the International Federation of Teachers' Associations at Prague, during a general discussion on the organization of teaching, defined its position with regard to university education for workers and peasants; this education for adults should, it was decided, be optional and independent, being organized by social groups which can appeal to teachers and the universities for support.

"The cooperation of teachers' associations was accepted by the Conference of International Trade Secretariats at Stockholm on July 6, 1930, which asked the International Federation of Teachers' Associations to draft an international program for education and training to be submitted for approval to the executive of the International Federation of Trade Unions. The fifth congress of the Red International at Moscow organized a special conference on questions of education and trade-union propaganda. The resolutions adopted by this conference are intended to guide Communist trade-unions in questions of workers' education. One of the resolutions recommends the creation of trade-union schools attached to the national revolutionary trade-union federations. It also approved the creation of a faculty of trade-unionism in the Lenin International School in Moscow.

"The International Conference on Wireless for the Workers, held in September in Prague, was attended by delegates from Austria, Czechoslovakia, Denmark, the Free City of Danzig, and the Netherlands.

"The council of the World Association for Adult Education, which met at Brunswick in Sweden on August 25, decided to convene in 1931 a special conference to discuss broadcasting and adult education.

"In 1930 an international workers' education week was organized in Bernau in the new school for militant trade-unionists set up by the German Federation of Trade Unions.

"All these movements and all these demands found expression at the fourteenth session of the International Labor Conference. This was the first occasion on which the problem of workers' education,

linked up with vocational training and the utilization of workers' spare time, had been in a concrete form before the organization. On the proposal of Mr. Jouhaux, French workers' delegate, the conference unanimously adopted a resolution for the purpose of guaranteeing the workers' opportunities for the full development of their personalities and recommending in particular that means should be sought for establishing a system of workers' education. This resolution was considered by the Governing Body in October, 1930. It was decided, in order not to complicate the problem by studying all the efforts made in the direction of adult education, that the office should first of all study the workers' education movement in collaboration with the workers' organizations.

Utilization of Workers' Spare Time

"AMONG the problems connected with the utilization of spare time the one which is at present engaging the attention of those concerned and giving rise to the greatest amount of activity is that of workers' education which was already dealt with in the preceding section. It will therefore suffice here to mention the international action which has been taken in connection with problems other than education and the official or private national institutions dealing with the whole field of spare time.

"It is quite impossible to give a complete survey of the spare time movement, which is carried out by an infinite number of small groups working in the most varied spheres. It must therefore suffice to refer only to the central organizations which coordinate the various activities in different countries. Such organizations are still few in number, and there may be countries which have numerous and ancient institutions for the organization of spare time without any central coordinating body. If these are not mentioned here that does not mean that the problem of spare time is neglected in that country, but merely that it appears in such a complex form that it can not be systematically dealt with in these pages.

National Activities—Official

"*Belgium.*—The supreme council set up by the act of April 3, 1929, to encourage popular education and insure a fuller utilization of workers' spare time was given its final form by the royal order of March 3, 1930, and the first meeting was held on May 6. The council decided before taking any positive action to undertake an inquiry on a large scale so as to obtain information as to the work already being done in the country.

"The older provincial organization, which will not be replaced by the supreme council but will have the support of the latter, continued its work in 1930 in every branch of activity connected with spare time, housing, workers' gardens, physical training, intellectual and moral education, etc. The Province of Antwerp devoted 400,000 francs to its spare-time institute. The Provinces of Brabant and Hainaut each placed half a million francs to the credit of their spare-time committee, and the Province of Liège spent 250,000 francs for the same purpose. In addition to this action by the Provinces there is a system of official municipal organizations. For example, the

municipality of La Louvière set up a spare-time committee which spent almost 20,000 francs in 1930 in grants to libraries.

Italy.—The National Dopolavoro Institute, which had 280,000 members in 1926, one year after its creation, had a million and a half at the beginning of 1930. This institute, which is strictly supervised by a central committee, covers the whole country with a network of provincial and local bodies. Its activities are directed toward four main fields: Physical training, including sport and travel; artistic education, including music, the cinema, wireless and the theater; general and vocational education; welfare, which includes workers' gardens, the care of the home, holiday colonies, sanatoria, etc. Certain categories of workers have special organizations; there exist, for example, a women's Dopolavoro, a rural Dopolavoro, a railway Dopolavoro, etc.

"The figures published in 1930 for the year 1929 show a total of more than 53,000 sporting events and more than 28,000 excursions organized by the physical training groups, 41,000 artistic performances and more than 23,000 educational meetings. In the field of welfare about 6,800 events have to be recorded (exhibitions, congresses, lectures, etc.).

National Activities—Unofficial

France.—Although the institution which was set up last year is not directly controlled by the public authorities, it has at least the same purpose as those in the countries mentioned above, namely, of dealing with the whole problem of spare time throughout the country.

"The national spare-time committee, which the National Federation of Distributive Cooperative Societies decided to set up in 1929 at its congress in Royan, came into being on May 7, 1930. Its program of action has five principal divisions: General education, travel, holidays, physical training and workers' gardens. It will also deal with various other questions, such as the decoration of the home, popular festivals, the cinematograph, etc. Its rules permit it to set up all the necessary institutions for carrying out this program. At present it is engaged in organizing centers for general education, a people's tourist agency, a national holiday society, a technical sports office (including a technical administrative section and a medical section) and an office for workers' gardens. The general education centers, which will work chiefly by visits to museums, factory laboratories, etc., are still in course of organization, but a certain number have begun work.

International Activity

"International Socialist Federation for Physical Culture and Workers' Athletics.—This association, which celebrated its tenth anniversary in 1930, reached a membership of 2,000,000 in that year. It is making active preparations for the second workers' Olympic games, to be held at Vienna, the first part of which (winter sports) was successfully held at Mürzzuschlag in the winter of 1930-31. Among the questions attracting the close attention of the international federation are the utilization of spare time for sport and the influence of physical training on alcoholism, both of which will be placed on the agenda of its sixth congress in 1932 and will, it is hoped, be studied in collaboration with the International Labor Office.

"International Committee for People's Theaters.—This committee, which was set up in 1926, held a meeting at Liège in June, 1930, where it dealt chiefly with the development of a bulletin published by the committee since 1929, which provides the national federations with information as to the technique of amateur theaters.

"Second International Congress on Popular Art.—This congress was held in Antwerp, Liège, and Brussels from August 28 to September 7, 1930, and was attended by 200 members from 28 countries, most of whom had been sent by their Governments.

"It studied in particular the question of public festivals and family festivals. It was decided that the next congress should be held at Berne in 1934 and should be supplemented by an international exhibition of popular art.

"First International Congress on Workers' Spare Time.—For the first time international touch has been established between various national organizations dealing with the problem of spare time. About 300 members from 18 countries attended a meeting at Liège in June, 1930, at which 14 Governments were officially represented.

"This congress adopted a great number of resolutions. One suggests the institution of an advisory committee on the utilization of spare time, attached to the International Labor Office; a second suggests that national public utility bodies should be set up in different countries to encourage and coordinate all the work connected with spare time. A further resolution deals with the development of physical training by the creation of gymnasiums, playing fields, and swimming baths, the training of teachers and the organization of practical medical supervision. The congress also drew the attention of the public authorities to the extreme importance of the worker's home for the utilization of spare time and the necessity for encouraging every effort to make his home more comfortable and more attractive.

"The congress stressed the importance of the wife in the organization of a family's spare time and demanded a number of reforms which might make her more fitted to fulfill her functions in this direction; these reforms referred chiefly to school education and the progressive reduction, by an improved social policy, of the employment of married women.

"The congress several times referred in its resolutions to the recommendation on workers' spare time adopted by the international labor conference in 1924. Before concluding its work it requested the Belgian Supreme Council for National Education to arrange as soon as possible for a second international congress on workers' spare time."

Denver Opportunity School

THE Opportunity School of Denver, which will celebrate its fifteenth birthday this September, is "an example of pioneer thinking and action in public schooling for adults," Robert Tudor Hill writes in the July, 1931, number of the *Journal of Adult Education*. He attributes the expansion and achievements of this institution to the fact that it relates itself directly to the personal needs of adults and to the basic educational community needs of the city of Denver.

The school receives annually several thousand dollars from Federal funds under the Federal vocational education act, but the undertak-

ing is not wholly vocational. Courses of instruction are given in the common branches and in high school precollegiate subjects that are obviously cultural, but in general it is not an easy matter at this school to differentiate strictly between vocational and liberal education.

The enrollment at the school according to the article referred to shows an age distribution from 16 to more than 60. For special reasons a few persons under 16 may be admitted. It is, however, predominantly a school for adults and they avail themselves of it in numbers that tax its equipment and resources to the limit.

To keep pace with the increasing demands upon the school, a very much larger building is in course of construction, which will take the place of the present quarters. One 4-story wing of this new structure has already been utilized. The school has a day and an evening faculty of more than 100 teachers and also an administrative staff. For 1929-30 the operating costs totaled \$214,000, which is apparently but not actually, a large sum for an institution of this character. No item in the school budget of Denver is more solidly established, it is reported, than the provision for funds for the efficient operation of the Opportunity School.

Beginnings of the Project

WHEN teaching one of the higher grades in one of Denver's poorer districts, Miss Emily Griffith was brought to a realization of the effect of home conditions upon the school work of her pupils. She visited and revisited their homes and found fathers and older brothers unequipped for their jobs, mothers unable to manage their households, and older sisters trying to make a living wage. She found these men and women unschooled despite their schooling, discouraged, a prey to anxiety and worry, out of accord with life and unable to shoulder properly their parental and civic responsibilities. She talked over the problem with school authorities, with business men, industrial and civic leaders, representatives of labor, women's clubs, service clubs, and the parents of the young people in whom she was especially interested. The idea of a school for underprivileged and vocationally handicapped men and women at last took shape. In the course of time Miss Griffith formulated plans which won the approval of the board of education. An old school building was assigned to her and she was told to go ahead.

Convinced that adult education must be an outgrowth of human needs, Miss Griffith invited men and women to register their desires. People came in large numbers to discuss their wants with her. She encouraged them to enroll for study courses for which they felt an actual need. When large enough groups were registered for either day or evening classes, she engaged competent teachers. By the close of the first school year in 1916-17 approximately 2,400 had been enrolled.

Courses of Instruction

THE variety of the Opportunity School's curriculum is shown by the following list of subjects in which instruction was given in the school year 1930-31:

Acetylene welding; applied electricity; architectural drafting; auto mechanics; baking; battery repair; beauty parlor trade; blue-print reading; bookkeeping;

bookbinding; bricklaying; business arithmetic; business English; business spelling; carpentry; citizenship; common-school branches; cooking; costume designing; dictaphone; electric welding; estimating; foundry pattern making; high-school subjects; lectures on welding; lip reading; machine shop; mechanical drawing; millinery; multigraphing; painting and decorating; plumbing; printing; public speaking; salesmanship; sewing; shoe repairing; shop chemistry; shorthand; showcard writing; telegraphy; typewriting; use of the steel square.

There are classes for those who can not read or write, and there is tutoring for those who need individual instruction. There are classes in English for the foreign born and dictation classes for those who want to develop speed in shorthand. There is a well-equipped library with counseling service for those who want advice in the selection or the direction of their reading. Help is provided for those who want citizenship papers. Girls and young women on probation or under institutional care are put into special classes.

So far as possible the school's shops, workrooms, and laboratories duplicate actual employment conditions in business and industry. In certain respects the school scheme closely approximates a continuation and part-time school for men and women through cooperative arrangements made by the institution with industrial and business establishments and with trade-unions. Moreover, the industrial and business community has been very helpful to the school in procuring the required equipment and facilities for the office department, the telegraph school, machine shops, automobile repair shops, etc. There is a school press for use in instruction in printing and binding. The printing and binding for the school are done in the print shop. In this, as well as in other ways, the products from the school's shops are absorbed without militating against local business.

The Human Emphasis

THE school stresses the teaching of men and women rather than the teaching of subjects—it is a school “with a heart,” the author declares. “The development of the personality and latent ability of the student, in the direction in which he wishes to go,” is the main objective of this educational scheme.

“You can do it.” That is the school motto. Every possible encouragement is given to men and women to begin and to carry on the study of anything they need or want to know. Unnecessary obstacles to enrollment and attendance are removed. There are few if any entrance requirements to block the way. It is assumed that competent men and women who want to do something worth while for their own advancement can and will, with proper encouragement, carry through. The school's job is to see that they do. On a large blackboard in the lower hall appears this message: “Do not drop your work until you talk with me. Perhaps I can think of something to help. Emily Griffith, Principal.” And she does.

On the bulletin board in the hall appears also this notice: “Night pupils who come directly from work to school, wishing a bowl of soup, see Mrs. Miller.” (Mrs. Miller is the assistant principal and Miss Griffith's “right-hand man.”) And here is another story.

In the opening days of the school the principal found that pupils often came to their classes direct from their jobs, expecting to get their dinner or supper after school hours. Occasionally, this going without food for such a long time resulted in illness. To meet the situation the principal arranged to serve soup at her own expense. Later, however, another Denver woman assumed this financial responsibility. In the soup kitchen many discussions have taken place with the students concerning their personal problems. Frequently, Miss Griffith or Mrs. Miller have a bowl of soup after their own evening meal. When

asked why they do not turn over the soup feature to someone else, Miss Griffith has explained that "there might then be only a soup kitchen and not a 'soup fellowship.' "

The philosophy of this educational institution seems to be "Give men and women an opportunity for self-development, for doing what they want to do, for trying to become what they want to be, and they will accomplish much."

The Teachers

THE following official statement is made concerning teachers for the Opportunity School:

The professional requirements for teachers of academic subjects are the same as those for like work in the elementary schools and high schools of the city. As far as possible teachers are selected who have had experience that seems to fit them for sympathetic understanding of the problems likely to arise because of the wide range of age and educational desire incident to the many-sided purposes of the school. Instructors in all trade departments are men and women with years of successful trade experience. Furthermore, they are selected because of breadth of vision concerning the problems of the industrial world.

This Opportunity School has been successful, the author of the article under review asserts, because it has had not only inspired leadership and able administration but also a teaching staff which has grasped "the idea."

The whole staff and approximately one-half of the teachers serve on a full-time basis. Such full-time service is made practicable to some extent through the combination of day and evening sessions. The author holds that this full-time feature is a highly important one and is worthy of serious consideration by educational authorities in other municipalities. The experience of this Denver school, he contends, shows the desirability of having a full-time faculty and a full-time administrative staff for such an educational undertaking. "It could not possibly function as a sound community agency for continuation education among adults without full-time direction."

The school opens in September and closes in June, and during the term is in session five days per week, from 8 a. m. to 9.15 p. m., except on Friday evenings. During the scholastic year 1929-30 there were 9,550 students enrolled. This number is approximately 15 per cent of all pupils of all ages enrolled in Denver's public schools. The average daily student attendance during the same period was more than 3,500. The apparently high attendance mortality indicated by these figures may, the author suggests, be in fact attendance vitality, as much depends upon one's angle of vision. If, because of special ability or application, an adult learns in half the time a child does and if he acquires in a brief period what he went to school to get, why should he remain longer? Students may enter or leave at will the Opportunity School's courses. Occupational or home duties must be considered first. As far as practicable schedules are fitted to the particular conditions and needs of the individual student. The school's policy in this connection is officially stated as follows:

Every effort is made to adjust the program to fit the individual's time. Many programs must be arranged for a few hours a week, for alternative weeks, for alternate day and night classes, for an intensive program of eight hours a day, for a few weeks or a few months. Some get the training they want in a short time; others attend for several years.

Short-unit courses are becoming more popular. The writer points out that well-defined incentives make for efficient learning. In his judgment, a large part of the success of the Opportunity School is due to the fact that a person may study there directly and definitively what he or she desires to learn at the moment.

Vocational Counsel and Placement

PERSONAL counseling and occupational placement are also vital features of this school. No person is enrolled without conferences of a more or less detailed nature with principals, assistants, or teachers. This counseling is also continued during the student's courses if he desires to have it, or if there are indications that he needs it. No one leaves the institution without having full access to the services of the employment bureau. In the last year approximately 1,500 persons, or 15 per cent of the total annual enrollment, have been placed in business, industrial, domestic, or miscellaneous employment by the director of this bureau.

The office of the principal and staff assistants is in an open hall close to the main door of the institution. The employment bureau is very near the office, and the staff counselor's desk is right across the hall. In this way an immediate, constant and personal contact is always provided between students and those in charge. Members of the staff are also stationed near the other doors of the school so that students on their first visit to the institution will at once find themselves in friendly hands.

In brief, the Opportunity School, the writer holds, constitutes "a part of the adult life of Denver." Its program has been worked out in response to the requirements of the people of that city. The institution increases their industrial and business efficiency. It raises living standards and sets up high ideals of citizenship.

INDUSTRIAL DISPUTES

Strikes and Lockouts in the United States in July, 1931

DATA regarding industrial disputes in the United States for July, 1931, with comparable data for preceding months, are presented below. Disputes involving fewer than six workers and lasting less than one day have been omitted.

Table 1 shows the number of disputes beginning in 1927, 1928, 1929, and 1930, number of workers involved and man-days lost for these years and for each of the months—January, 1929, to July, 1931, inclusive—as well as the number of disputes in effect at the end of each month and the number of workers involved. The economic loss (in man-days) involved is computed by multiplying the number of workers affected in each dispute by the length of the dispute measured in working-days as normally worked by the industry or trade in question.

TABLE 1.—INDUSTRIAL DISPUTES BEGINNING IN AND IN EFFECT AT END OF EACH MONTH, JANUARY, 1929, TO JULY, 1931, AND TOTAL NUMBER OF DISPUTES, WORKERS, AND MAN-DAYS LOST IN THE YEARS 1927, 1928, 1929, AND 1930

Month and year	Number of disputes		Number of workers involved in disputes		Number of man-days lost during month or year
	Beginning in month or year	In effect at end of month	Beginning in month or year	In effect at end of month	
1927: Total.....	734	-----	349,434	-----	37,799,394
1928: Total.....	629	-----	357,145	-----	31,556,947
1929: Total.....	903	-----	230,463	-----	9,975,213
1930: Total.....	653	-----	158,114	-----	2,730,368
1929					
January.....	48	36	14,783	39,569	951,914
February.....	54	35	22,858	40,306	926,679
March.....	77	37	14,031	40,516	1,074,468
April.....	117	53	32,989	52,445	1,429,437
May.....	115	73	13,668	64,853	1,727,694
June.....	73	57	19,989	58,152	1,627,565
July.....	80	53	36,152	15,589	1,062,428
August.....	78	43	25,616	6,714	358,148
September.....	98	49	20,233	8,132	244,864
October.....	69	31	16,315	6,135	272,018
November.....	61	32	10,443	6,067	204,457
December.....	33	21	3,386	2,343	95,541
1930					
January.....	45	21	9,240	5,316	184,730
February.....	52	40	37,480	6,683	438,570
March.....	49	38	15,017	5,957	291,127
April.....	64	41	6,379	5,840	189,828
May.....	66	29	9,329	4,386	185,448
June.....	59	34	14,011	8,311	144,117
July.....	78	30	14,308	4,815	141,647
August.....	51	33	15,902	7,131	142,738
September.....	72	44	16,337	13,778	208,184
October.....	47	36	10,858	16,007	335,916
November.....	44	29	4,390	7,759	273,608
December.....	26	7	4,863	5,144	194,455
1931					
January.....	56	20	10,147	2,927	181,031
February.....	52	34	19,984	12,512	228,329
March.....	45	27	26,121	28,139	422,545
April.....	60	39	26,442	22,604	769,720
May.....	106	49	27,588	15,735	402,437
June ¹	118	98	25,177	25,334	603,963
July ¹	61	113	48,196	68,282	877,789

¹ Preliminary figures subject to change.

Occurrence of Industrial Disputes, by Industries

TABLE 2 gives, by industry, the number of strikes beginning in May, June, and July, 1931, and the number of workers directly involved.

TABLE 2.—INDUSTRIAL DISPUTES BEGINNING IN MAY, JUNE, AND JULY, 1931

Industry	Number of disputes beginning in—			Number of workers involved in disputes beginning in—		
	May	June	July	May	June	July
Bakers.....	4			125		
Barbers.....	1	1		1,200	360	
Brewery and soft-drink workers.....	1			20		
Building trades.....	31	17	16	5,503	1,902	2,427
Chauffeurs and teamsters.....	1	6	3	150	992	141
Clothing.....	12	13	12	489	1,335	35,838
Fishermen.....			1			350
Food workers.....	1	1	1	125	8	60
Furniture.....	1	1	2	13	40	114
Glass workers.....	1			85		
Iron and steel.....	2	1		1,600	30	
Jewelry workers.....			1			12
Leather.....	6			2,801		
Light, heat, power, and water.....		1			150	
Longshoremen and freight handlers.....			1			60
Lumber, timber, and mill work.....		1			40	
Metal trades.....	5	1	1	304	13	11
Mining.....	25	61	7	5,121	18,953	2,686
Motion-picture operators, actors, and theatrical workers.....		3	1		39	14
Printing and publishing.....	1	1		12	10	
Stone.....		1			8	
Municipal workers.....	1	1		3,300	16	
Textiles.....	8	6	12	6,055	1,205	6,354
Tobacco.....	4			185		
Other occupations.....	1	2	3	500	76	104
Total.....	106	118	61	27,582	25,177	48,196

Size and Duration of Industrial Disputes, by Industries

TABLE 3 gives the number of industrial disputes beginning in July, 1931, classified by number of workers and by industries.

TABLE 3.—NUMBER OF INDUSTRIAL DISPUTES BEGINNING IN JULY, 1931, CLASSIFIED BY NUMBER OF WORKERS AND BY INDUSTRIES

Industry	Number of disputes beginning in July, 1931, involving—					
	6 and under 20 workers	20 and under 100 workers	100 and under 500 workers	500 and under 1,000 workers	1,000 and under 5,000 workers	5,000 workers and over
Building trades.....	2	7	5	2		
Chauffeurs and teamsters.....	1	2				
Clothing.....	1	6	2		2	1
Fishermen.....			1			
Food workers.....		1				
Furniture.....	1		1			
Jewelry workers.....	1					
Longshoremen and freight handlers.....		1				
Metal trades.....	1					
Mining.....		1	4	1	1	
Motion-picture operators, actors, and theatrical workers.....	1					
Textiles.....	2	2	4	3	1	
Other occupations.....	1	2				
Total.....	11	22	17	6	4	1

In Table 4 are shown the number of industrial disputes ending in July, 1931, by industries and classified duration.

TABLE 4.—NUMBER OF INDUSTRIAL DISPUTES ENDING IN JULY, 1931, BY INDUSTRIES AND CLASSIFIED DURATION

Industry	Classified duration of strikes ending in July, 1931		
	One-half month or less	Over one-half and less than 1 month	1 month and less than 2 months
Building trades.....	12	2	3
Chauffeurs and teamsters.....	2		1
Clothing.....	5		3
Food workers.....	2		
Furniture.....	2		
Jewelry workers.....	1		
Longshoremen and freight handlers.....	1		
Metal trades.....	1		
Mining.....	3	1	
Motion-picture operators, actors, and theatrical workers.....	1		
Textiles.....	6		
Total.....	33	3	7

Principal Strikes and Lockouts Beginning in July, 1931

Bituminous coal miners, West Virginia.—A strike for union recognition began on July 6 in the Kanawha district, involving about 1,500 men. This strike was called by the West Virginia Mine Workers, a new organization in that district. Information is not available as to the outcome of this strike, but it is known that some of the older men have returned to work.

Textile workers (woolen), Rhode Island.—The Weybosset Mills of the American Woolen Co. at Providence were affected by an unsuccessful strike of 638 spinners, twistors, weavers, etc., from July 8 to July 20. It is reported the workers wanted their wages increased to offset a reduction of 12½ per cent said to have been in effect since last winter.

Road workers, New York.—A strike of some 825 laborers on road-construction work in Westchester County, which began on July 10, is understood to have ended on August 3. The men declined to work for 40 cents an hour and demanded \$5 per day. They were allowed 50 cents an hour until January 1, 1932.

Textile workers (silk), Connecticut.—Some 500 employees of the Edward Bloom Co. (Inc.), at Putnam, struck on July 13, demanding it is said, a working week of 48 instead of 55 hours, with no wage reduction. This strike, which was sponsored by the National Textile Workers' Union, is still in effect.

Silk workers, New Jersey.—Several hundred silk workers in Paterson under the leadership of the National Textile Workers' Union struck on July 22 for an 8-hour day, a 5-day week, increased wages, restoration of previous wage cuts, unemployment relief and insurance, etc. Subsequent additions to the ranks of the strikers brought the number, it is said, to about 1,500. The original demands are believed to have been modified.

Other workers, numbering some 6,500, affiliated with the Associated Silk Workers and the United Textile Workers, began a strike on July

27, demanding a 44-hour week with wage increases. Hours, it is alleged, have been of irregular duration, ranging up to 10, 11, and 12 per day.

These strikes are still in progress.

Clothing workers, New York City.—Protesting against alleged sweatshop conditions and desiring to establish a more perfect union through the extension and perfection of the organization's control over the industry, the Amalgamated Clothing Workers of America began a strike or stoppage on July 29, involving some 30,000 men's clothing workers in New York City and vicinity.

Some of the workers returned after an agreement was reached on July 30 between the union and the New York Clothing Manufacturers' Exchange, the principal employing group. Concessions were made by both sides in reaching the agreement, which is to run for two years, ending June 30, 1933. Settlements were also effected from time to time with independent proprietors, so that by August 5 about two-thirds of the strikers had returned to work.

The strike, it is understood, has been mainly against those shops which have failed to observe union standards and the objective has been not so much the signing of the agreement as the enforcement of it. The slowness in reaching settlements is due, it is indicated, to the insistence of the union in requiring bonds for the carrying out of the agreements. The principal changes in the agreement over the old one which expired July 1, authorizes, it is said, the imposition of a penalty by the impartial chairman upon any manufacturer sending work to a nonunion contracting firm and gives permission to the employers to participate in fixing rates for each labor operation in the production of garments.

Clothing workers, New Jersey.—In addition to the clothing workers who struck in New York City on July 29, about 2,000 workers stopped work in Egg Harbor, Hammonton, and Vineland, demanding, according to press reports, a signed agreement. They also objected to the sending of work to nonunion factories "outside." No report of the ending of this strike or strikes has been received.

Anthracite coal miners, Pennsylvania.—A strike of 500 miners affecting the Raven Run Colliery of the Judds Highland Coal Co., at New Girardsville, is reported to have begun on July 29 as a protest against the employment of men who refused to pay a fine for the violation of union rules. Dues were paid and the men returned to work on July 31.

Principal Strikes and Lockouts Continuing into July, 1931

Hosiery workers, Philadelphia.—It is understood that the strike which began on February 16 still continues in part.

Silk workers, Pennsylvania.—The strike of some 3,000 workers in Allentown, beginning as of May 1, still continues in part.

Taxi drivers, Pittsburgh.—A report has been received of the ending on June 20 of the strike of 880 taxi drivers which began on June 13. The number of strikers was originally reported as 1,000. This strike, it appears, was unsuccessful.

Bituminous coal miners, Illinois.—The strike of miners which began in June at Benton in the Orient mines of the Chicago, Wilmington & Franklin Coal Co. ended on August 6. The strike, it is said, was in defiance of the international officers of the United Mine

Workers of America, and the men returned after being warned that they must do so under penalty of being discharged and of forfeiting their membership in the union. Later and more reliable information shows that the number of strikers was 2,100 and not 2,270 as originally reported; also, that the strike at one mine (the New Orient) began on June 6 and at the other (the Orient No. 1) on June 18.

Textile workers, Rhode Island.—As to the strike of some 600 employees of the Royal Weaving Co. at Pawtucket, which began June 25, it was stated on August 4 that the company had as many workers as it could use because of market conditions and the large quantity of finished goods in the storerooms.

Bituminous coal miners.—The disturbances in northern West Virginia, western Pennsylvania, and eastern Ohio, to which allusion was made in the July issue of the Review, have subsided. Especially is this true, so far as the effect on coal production is concerned, of northern West Virginia and the Pittsburgh district, where the output has for some time been equal to, if not in excess of, the production before the strike. Press reports of July 18 indicated the collapse of the strike in eastern Ohio, stating that the strikers were returning and that "the last mine shut down by the strike in the area" would resume operations by July 20.

The Simpson Creek Collieries Co., of Cleveland, Ohio, resumed operations at their Galloway (W. Va.) mines on August 18 on the same basis as to wages and hours as existed when the strike began on June 18.

Conciliation Work of the Department of Labor in July, 1931

By HUGH L. KERWIN, DIRECTOR OF CONCILIATION

THE Secretary of Labor, through the Conciliation Service, exercised his good offices in connection with 68 labor disputes during July, 1931. These disputes affected a known total of 27,047 employees. The table following shows the name and location of the establishment or industry in which the dispute occurred, the nature of the dispute (whether strike or lockout or controversy not having reached the strike or lockout stage), the craft or trade concerned, the cause of the dispute, its present status, the terms of settlement, the date of beginning and ending, and the number of workers directly and indirectly involved.

On August 1, 1931, there were 60 strikes before the department for settlement and in addition 29 controversies which had not reached the strike stage. The total number of cases pending was 89.

LABOR DISPUTES HANDLED BY THE CONCILIATION SERVICE DURING THE MONTH OF JULY, 1931

Company or industry and location	Nature of controversy	Craftsmen concerned	Cause of dispute	Present status and terms of settlement	Duration		Workers involved	
					Beginning	Ending	Directly	Indirectly
Fishermen, Erie, Pa.	Strike	Fishermen and boatmen.	Wages cut from \$6 to \$5 per day.	Pending.	1931 July 1	1931	350	50
Painters, Pittsburgh, Pa.	do.	Painters.	Working rules and conditions.	do.	do.	do.	20	60
Queens County General Hospital, Jamaica, Long Island, N. Y.	do.	Laborers.	Jurisdiction.	do.	June 26	do.	(1)	do.
R. R. Fur Manufacturing Co., New York City.	Threatened strike.	Fur workers.	Wage scale; work sent to outside shops.	Adjusted. Cutters allowed \$55 per week; others to be increased \$5 per week to \$47.	July 1	July 2	9	do.
Poses & Greenberg, New York City.	do.	do.	do.	Adjusted. Allowed \$5 per week increase to \$50.	do.	do.	7	3
Taxicab drivers, Columbus, Ohio.	do.	Drivers.	Asked increase and change in conditions.	Adjusted. Continued without strike.	July 5	July 9	250	do.
Englander Bed Spring Co., Brooklyn, N. Y.	Strike.	Mattress workers.	Wage cut of 5 to 25 per cent.	Adjusted. Accepted cut and returned.	July 3	July 7	100	150
Post-office building, Albany, N. Y.	Controversy.	Laborers on wrecking crew.	Contractor paying only 30 cents per hour.	Adjusted. Satisfactory agreement.	July 2	July 25	135	do.
Emery Thompson Frezer Co., New York City.	Strike.	Employees.	Wages cut 10 per cent.	Adjusted. All accepted cut and returned, except 8 workers who were discharged.	June 30	July 1	8	37
Building, Allentown, Bethlehem, Easton, Pa.	Lockout.	Plumbers and steamfitters.	Wages cut from \$1.20 to \$1 per hour. Asked union agreement.	Adjusted. Continued rate of \$1.20 per hour; verbal agreement.	July 1	July 6	130	do.
Pittsburgh Sheet & Painting Co., Bedford, Mass.	Controversy.	Painters.	Prevailing wage not being paid.	Adjusted. Contractor will pay prevailing wage, \$1.10 per hour.	do.	July 3	7	do.
U. S. Assay Building, New York City.	Strike.	Granite cutters.	Demand that union labor be employed.	Adjusted. Returned with temporary settlement.	June 26	July 7	53	125
Building, Newark, N. J.	do.	Ironworkers.	Asked increase from \$14 to \$16 per day.	Pending.	July 7	do.	250	do.
Post-office building, Kankakee, Ill.	Controversy.	Building crafts.	Prevailing wage not being paid.	Adjusted. Contractor agreed to pay prevailing wages.	July 1	July 14	10	do.
Veterans' Hospital, Waco, Tex.	do.	Bricklayers.	do.	Adjusted. Contractor agreed to pay prevailing rate, \$13 per day.	July 7	July 13	(1)	do.
General Fabric Co., Central Falls, R. I.	Strike.	Textile workers.	Asked union recognition and reduction in number of looms to be operated.	Pending.	May 8	do.	800	do.
Royal Weaving Co., Pawtucket, R. I.	do.	do.	Cut of 1 cent per yard on box weaving.	do.	June 25	do.	600	1,300

LABOR DISPUTES HANDLED BY THE CONCILIATION SERVICE DURING THE MONTH OF JULY, 1931—Continued

Company or industry and location	Nature of controversy	Craftsmen concerned	Cause of dispute	Present status and terms of settlement	Duration		Workers involved	
					Beginning	Ending	Directly	Indirectly
Reiner & Berkow, New York City.	Strike	Jewelry	Wage cuts and lay-offs	Adjusted. Agreement concluded. Both sides made concessions.	1931 July 10	1931 July 20	12	---
Goldwear Sportswear Co., New York City.	do.	Knit-goods workers.	Cut in piece rates	Adjusted. Agreed to maintain piece rates existing prior to stoppage of work.	July 9	July 21	35	8
George Washington Memorial Bridge, Fort Lee, N. J.	Strike	Carpenters, ironworkers, engineers, laborers, etc.	Asked prevailing wage and employment of local men.	Adjusted. Engineers \$16; ironworkers \$16; dock builders \$13; carpenters \$12; laborers 45 to 60 cents per hour.	June 5	June 23	250	200
Bushelmen, tailors, etc., New York and Brooklyn, N. Y.	do.	Tailors, etc.	Protest wage cut \$10 per week, to \$38.	Adjusted. Agreed to arbitrate wage question, and 44-hour week.	June 15	July 20	300	---
Progress Shoe Co., Brooklyn, N. Y.	do.	Shoe workers	Wage cut.	Pending	July 18	---	56	---
Linder Novelty Slipper (Inc.), New York City.	do.	Slipper workers	Wage cut 10 to 15 per cent.	Adjusted. Accepted cut of from 5 to 7 per cent.	July 2	July 15	24	6
Glenmore Shoe Co., Brooklyn, N. Y.	do.	Shoe workers	Wage cuts; working conditions	Pending	July 14	---	38	10
Smollen Manufacturing Co., New York City.	do.	Garment workers	Asked union recognition and union shop.	do.	July 6	---	80	9
Columbia Granite Co., (Inc.), Columbia, S. C.	Controversy	Cutters and polishers.	Wage cuts	Adjusted. Accepted cut of 40 cents per day, to \$8.40.	July 1	July 18	16	---
Shell Oil Co., California	do.	Oil workers	Discussion of annual agreement	Adjusted. Agreement renewed. No change in wages.	July 27	July 30	3,500	1,000
Veterans' Bureau Hospital, Canandaigua, N. Y.	do.	Electricians	Wages and working conditions	Pending	July 28	---	225	200
Canonsburg Iron & Steel Co., Canonsburg, Pa.	do.	Iron, steel, and tin	Company refused to sign agreement with international union.	do.	July 15	---	180	220
Allegheny Highway, Oil City and Toinesta, Pa.	do.	Carpenters and road builders.	Received 60 cents instead of \$1.10, the established rate per hour.	do.	July 24	---	(1)	---
Schwarzenbach-Huber Silk Co., Columbia, Pa.	Strike	Silk weavers	Wages	Adjusted. Agreed on piece work; 10 per cent bonus allowed for certain kinds of work.	July 27	July 31	200	---
Painters, Oil City, Pa.	Controversy	Painters	Wages and conditions (3 men doing painting by contract).	Pending	July 15	---	3	---
Finlay Furniture Co., Chicago, Ill.	Strike	Upholsterers	Dismissal of union workers	Adjusted. Compromise agreement concluded.	July 17	July 22	18	---

Location, D. C.	Controversy	Workers	Wages	Adjusted. Agreed to arbitration to decide wages for skilled and unskilled labor, etc.	July 22	July 27	July 31
Atlantic & Pacific Co., Scranton, Pa.	Strike	Bread handlers	Long hours and low wages	Pending	July 20	July 27	16
Munsgwear, Fort Wayne, Ind.	Controversy	Textile workers	Report not received	do.	July 22	July 27	13
C. G. Foundry, Indianapolis, Ind.	Strike	Molders	Change to piecework	do.	(1)	July 22	8,000
Textile workers, Paterson, N. J.	do.	Textile workers	Asked 8-hour day, 5-day week and wage increases	do.	July 22	July 27	17
Post office, Boston, Mass.	do.	Truck drivers	Jurisdiction of loading steel from trains to trucks	Adjusted. Awarded to teamsters	July 23	July 28	13
Road construction, Westchester, N. Y.	do.	Truck drivers, shovel men, masons, and concrete workers	Sympathy with road laborers	Adjusted. Returned when laborers returned	Aug. 3	Aug. 4	125
Brown Dress Co., Bronx, N. Y.	do.	Dressmakers	Cut in piece rates	Adjusted. Accepted slight cut. Piecework rates increased 15 cents per garment	July 24	July 29	18
Metropolitan Button Works, New York City	do.	Button and novelty workers	Dispute with union representatives	Pending	July 25	July 27	14
Diana Frocks (Inc.), New York City	do.	Ladies' underwear makers	Proposed cut by change to time work instead of piece work	Adjusted. Proposal withdrawn. Plant being moved from New York	July 27	July 29	330
Heller Co., Belleville, N. J.	do.	Wire weavers	Renewal of contract	Pending	July 30	July 30	60
Garment workers, Newark, N. J.	do.	Garment workers	do.	do.	July 30	July 30	3,000
Lathers, Fort Harrison, Ind.	Controversy	Lathers	Use of nonresident lathers	Adjusted. Local lathers employed	June 25	July 1	15
Total							22,852
							4,195

1 Not reported.

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LABOR AGREEMENTS, AWARDS, AND DECISIONS

Decision of Industrial Commission of Colorado on Reduction of Coal Miners' Wages

ON AUGUST 4, 1931, the Industrial Commission of Colorado rendered a decision refusing the demand of the Bluff Springs Leasing Co., a coal mining company, for a reduction in the wage rates of its employees.

The company served notice July 7 of its intention to reduce the wages of its employees, effective August 7, 1931. On July 11 21 employees of the company filed a petition with the commission protesting against the proposed reduction.

At the hearing before the commission at Florence, Colo., July 8, the company contended that it was necessary to reduce the price of coal \$1.50 per ton in order to meet the competition of the large coal companies which had already reduced the price of coal. The company also contended that it had to pay a royalty of 55 cents per ton to the owners of the mine and 50 cents per ton commission for selling its coal, which caused a loss of 93 cents on each ton of coal sold. The employees contended that if their wages were reduced it would be impossible for them to earn more than \$3.50 to \$4 per day, and that such a wage was not sufficient for them to support their families and was therefore not a living wage.

The commission stated that, according to the records of the State coal mine inspector the coal miners of Colorado averaged a trifle over 183 days' work per annum during the last 10 years, and that the average number worked during 1930 was only 164 days.

The findings and award of the commission are as follows:

Considering the number of days a coal miner works per year, the present wage scale is not sufficient, and it is to be regretted that the employees should be required to sell their labor at a lower price. Labor should be the first charge against every industry, and the welfare of the wage earner should be the first consideration of every employer. If prosperity is to return to this land of ours it will never come by cutting the earnings of the men who produce the wealth of the Nation; reductions of salaries and wages of employees will delay the return of better times, because a reduction in wages or salaries will destroy the purchasing power of the men who make better business possible. It seems to us it is not large stock dividends or large bank accounts that make prosperous times, but good wages and salaries to the working men and women of the country.

The large coal companies who have reduced the price of coal to the point where they can not pay a living wage to their employees, and who are therefore forcing the smaller companies to do the same thing in order to meet this sort of unfair competition, have committed a crime against human rights by forcing their employees to work for less than a living wage.

This commission believes that a living wage is one that is sufficient for a man to live decently and to educate his children in the manner that an American child should be educated; to get some pleasure out of life and, by reasonable economy, to lay aside a few dollars for the day when old age shall come and he can toil no longer.

The coal mines of this State, when the number of days the coal miner works per annum are considered, are not paying over one-half a living wage at the present wage scale.

Therefore it is the decision and award of the commission that the present wage scale be retained.

New Agreement in English Engineering Industry

FOR months past there has been the threat of a serious dispute in the English engineering industry, the employers demanding changes in wages and conditions to which the workers were unwilling to agree. Both sides are strongly organized, the engineering joint trades movement, which is the workers' body, consisting of 40 unions with a membership of approximately 1,000,000. In May negotiations were broken off, neither side being willing to accept the other's proposals. Strong efforts were made to bring them together, and according to the Ministry of Labor Gazette for July, 1931, on June 20, the representatives of employers and employees agreed upon a revision of the employers' proposals which they would recommend to their respective bodies for acceptance. These terms were agreed to by the executives of the trade-unions on June 23, to become operative July 6, 1931.

Under the new agreement, overtime on day-shift work is to be paid for at the rate of time and a quarter for the first two hours, and thereafter at time and a half. Previously, all overtime on the day shift was paid for at the rate of time and a half, with double time after midnight. Other provisions are thus summarized by the Gazette:

On night shifts the new agreement fixes the payment at time and one-sixth, with overtime at time and a quarter for the first two hours and time and a half thereafter, calculated on the day-shift rate. Previously the rate of payment was time and a third, with overtime at time and two-thirds.

The agreement provides that all overtime worked in coupling up day and night shifts, or night and day shifts, shall be paid at time and a quarter, and that such overtime shall not be included in the 30 hours' limitation in any four weeks.

Revisions in the payment for double day shift and/or three-shift systems are as follows: On the first shift 43 hours' work is to be paid for as 45 hours, in place of 43 hours' work for 47 hours' payment; on the second shift, 37½ hours' work for 45 hours' pay in place of 37½ hours' work for 47 hours' pay; and on the third shift, 37½ hours' work for 47 hours' pay, in place of 37½ hours' work for 50 hours' pay.

The revised provisions with regard to systems of payment by results are as follows:

(a) All systems of payment by results will be subject to the following conditions:

No piecework prices, bonus, or basis times once established may be altered except for the following reasons:

(1) A mistake in the calculation on either side; or
(2) The material, means, or method of production, or the quantities, are changed; or

(3) A mutual arrangement has been come to between the employer and the worker in the same way as a new price is arranged.

(b) Piecework prices and bonus or basis times shall be such as will enable a workman of average ability to earn at least 25 per cent overtime rates, excluding war bonus.

(c) As regards existing prices or times:

(1) In those cases where the basis is 33⅓ per cent it will be reduced to 25 per cent, i. e., a reduction of 6¼ per cent.

(2) In those cases where the basis is by agreement or recognition greater than 33⅓ per cent, the reduction will be in the ratio of 33⅓ to 25.

LABOR TURNOVER

Labor Turnover in American Factories, July, 1931

THE Bureau of Labor Statistics presents herewith labor turnover rates for manufacturing as a whole and for 10 separate manufacturing industries.

In working turnover rates the Bureau of Labor Statistics uses the weighted arithmetic mean. The indexes for manufacturing as a whole are compiled from reports made to the bureau by representative establishments in over 75 industries, employing approximately 1,250,000 employees. In the 10 industries for which separate indexes are presented reports were received from representative plants employing approximately 25 per cent of the employees as shown for such industries by the Census of Manufactures of 1927. In the automobile industry schedules were received from plants employing 125,000 people; plants reporting for boots and shoes employed 100,000; those reporting for cotton manufacturing employed nearly 125,000 people; for brick, over 15,000 people; for foundry and machine shops, 175,000 people; for furniture, about 40,000 people; for iron and steel, over 225,000 people; for sawmills, approximately 65,000 people; for slaughtering and meat packing, nearly 85,000 people; and for men's clothing, about 40,000 people.

In addition to the quit, discharge, lay-off, total separation, and accession rates, the bureau presents the net turnover rate. The net turnover means the rate of replacement; it is the number of jobs that are vacated and filled per 100 employees. In a plant that is increasing its force the net turnover rate is the same as the separation rate, because while more people are hired than are separated from their jobs, the number hired above those leaving is due to expansion, and can not be justly charged to turnover. On the other hand, in a plant that is reducing its number of employees the net turnover rate is the same as the accession rate, for while more people are separated from the pay roll than are hired, the excess of separations over accessions is due to a reduction of force and therefore can not be logically charged as a turnover expense.

Table 1 shows for all industries the total separation rate, subdivided into the quit, discharge, and lay-off rates, together with the accession rate and net turnover rate, presented both on a monthly and an equivalent annual basis.

TABLE 1.—AVERAGE LABOR TURNOVER RATES IN SELECTED FACTORIES IN 75 INDUSTRIES

A.—Monthly Rates

Month	Separation rates								Accession rate		Net turn-over rate	
	Quit		Lay-off		Discharge		Total					
	1930	1931	1930	1931	1930	1931	1930	1931	1930	1931	1930	1931
January	1.85	0.74	2.70	1.95	0.54	0.19	5.09	2.88	3.95	2.97	3.95	2.88
February	1.60	.74	2.50	1.75	.62	.20	4.72	2.69	3.94	2.82	3.94	2.69
March	1.94	.94	2.83	1.75	.60	.26	5.37	2.95	4.15	3.67	4.15	2.95
April	2.11	1.14	2.57	1.96	.53	.31	5.21	3.41	3.55	3.06	3.55	3.06
May	2.01	1.12	2.68	2.43	.48	.28	5.17	3.83	3.28	2.79	3.28	2.79
June	1.85	1.02	3.00	3.84	.46	.23	5.31	5.09	2.92	2.41	2.92	2.41
July	1.35	1.10	4.17	3.32	.32	.25	5.84	4.67	2.51	3.02	2.51	3.02
August	1.40	-----	3.99	-----	.36	-----	5.75	-----	2.71	-----	2.71	-----
September	1.50	-----	3.14	-----	.36	-----	5.00	-----	3.27	-----	3.27	-----
October	1.29	-----	2.88	-----	.32	-----	4.49	-----	2.56	-----	2.56	-----
November	.90	-----	2.77	-----	.24	-----	3.91	-----	2.05	-----	2.05	-----
December	.84	-----	2.74	-----	.21	-----	3.79	-----	2.13	-----	2.13	-----
Average	1.55	-----	3.00	-----	.42	-----	4.97	-----	3.08	-----	3.08	-----

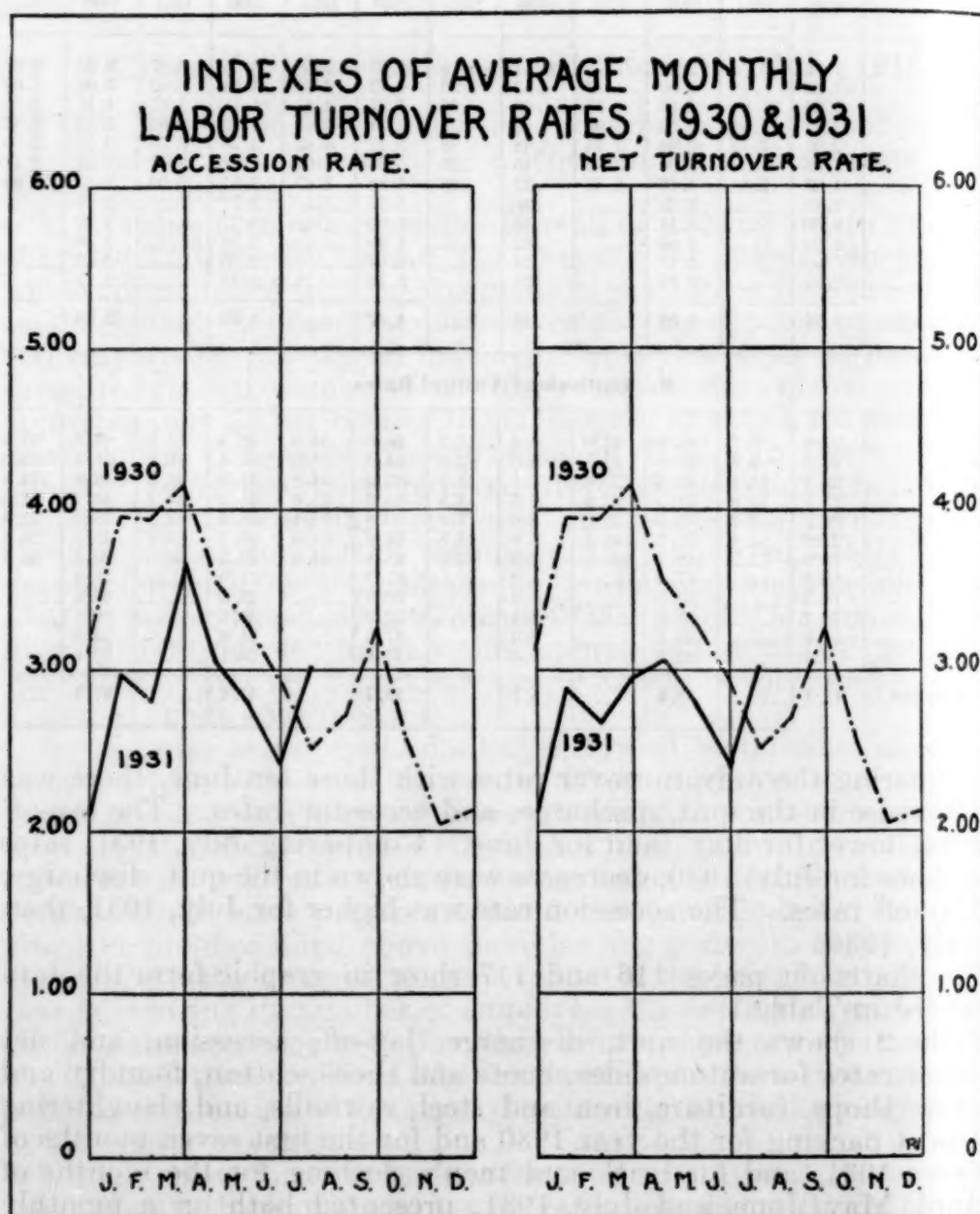
B.—Equivalent Annual Rates

January	21.8	8.7	31.8	23.0	6.4	2.2	60.0	33.9	46.5	35.0	46.5	33.9
February	20.9	9.6	32.6	22.8	8.0	2.6	61.5	35.0	51.4	36.8	51.4	35.0
March	22.8	11.1	33.3	20.6	7.1	3.1	63.2	34.8	48.8	43.2	48.8	34.8
April	25.7	13.9	31.3	23.9	6.5	3.8	63.5	41.6	43.2	37.2	43.2	37.2
May	23.7	13.2	31.5	28.6	5.6	3.3	60.8	45.1	38.6	32.8	38.6	32.8
June	22.5	12.4	36.5	46.7	5.6	2.8	64.6	61.9	35.5	29.3	35.5	29.3
July	15.9	12.9	49.1	39.1	3.8	2.9	68.8	54.9	29.5	35.5	29.5	35.5
August	16.5	-----	47.0	-----	4.2	-----	67.7	-----	31.9	-----	31.9	-----
September	18.3	-----	38.2	-----	4.4	-----	60.9	-----	39.8	-----	39.8	-----
October	15.2	-----	33.9	-----	3.8	-----	52.9	-----	30.1	-----	30.1	-----
November	11.0	-----	33.7	-----	2.9	-----	47.6	-----	24.9	-----	24.9	-----
December	9.9	-----	32.2	-----	2.5	-----	44.6	-----	25.1	-----	25.1	-----
Average	18.7	-----	35.9	-----	5.1	-----	59.7	-----	37.1	-----	37.1	-----

Comparing the July turnover rates with those for June, there was an increase in the quit, discharge, and accession rates. The lay-off rate was lower for July than for June. Comparing July, 1931, rates with those for July, 1930, decreases were shown in the quit, discharge, and lay-off rates. The accession rate was higher for July, 1931, than for July, 1930.

The charts on pages 116 and 117 show in graphic form the data presented in Table 1.

Table 2 shows the quit, discharge, lay-off, accession, and net turnover rates for automobiles, boots and shoes, cotton, foundry and machine shops, furniture, iron and steel, sawmills, and slaughtering and meat packing for the year 1930 and for the first seven months of the year 1931, and for brick and men's clothing for the months of April, May, June, and July, 1931, presented both on a monthly and an equivalent annual basis.



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INDEXES OF AVERAGE MONTHLY LABOR TURNOVER RATES, 1930 & 1931.

SEPARATION RATES

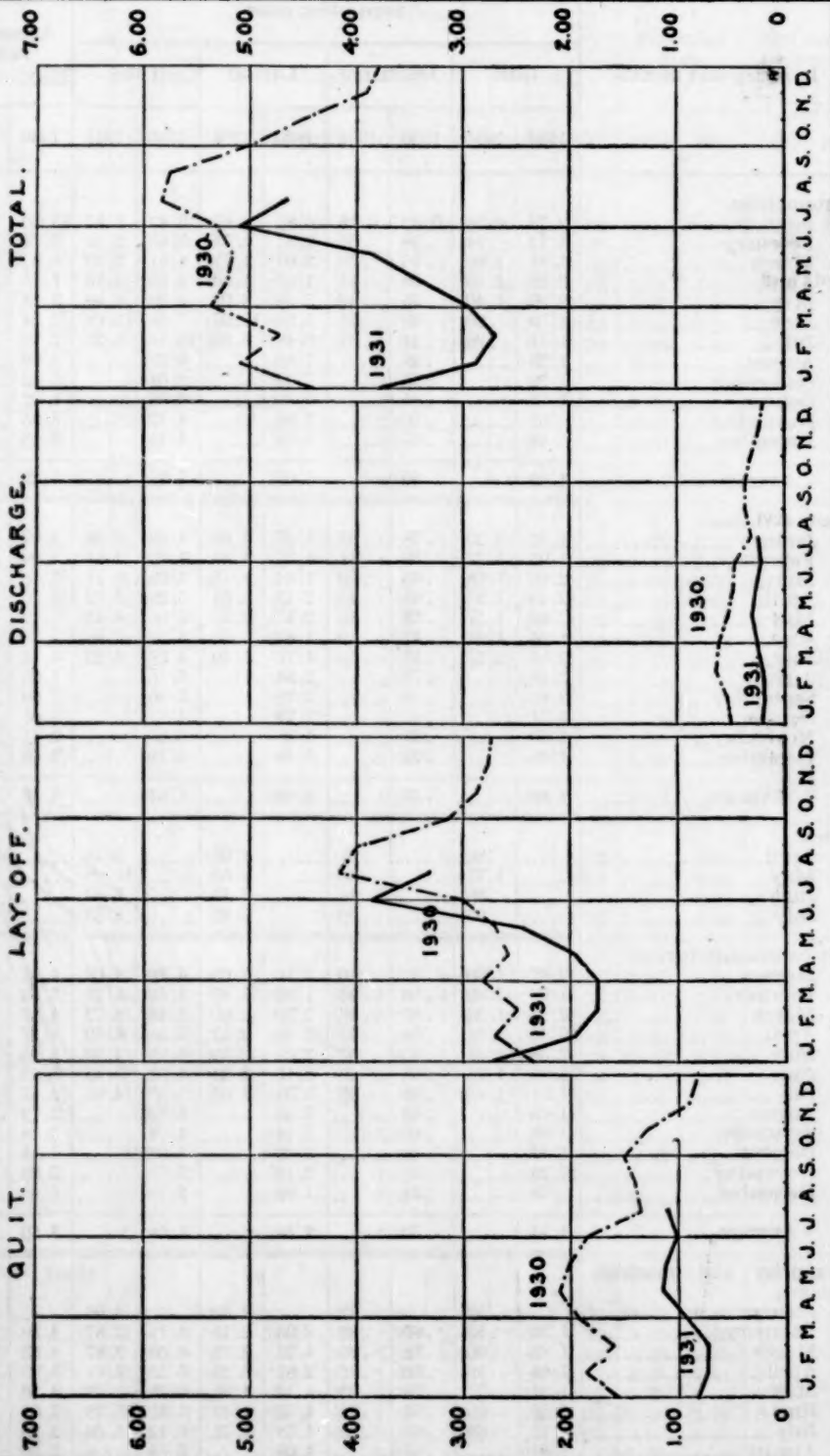


TABLE 2.—AVERAGE LABOR TURNOVER RATES IN SPECIFIED INDUSTRIES

A.—Monthly Rates

Industry and month	Separation rates								Accession rate		Net turnover rate	
	Quit		Discharge		Lay-off		Total		1930	1931	1930	1931
	1930	1931	1930	1931	1930	1931	1930	1931				
Automobiles:												
January.....	2.76	0.54	0.92	0.18	5.81	2.63	9.49	3.35	13.50	2.92	9.49	2.92
February.....	1.16	.74	.38	.21	2.31	1.71	3.85	2.66	4.74	4.12	3.85	2.66
March.....	1.81	1.09	.56	.39	2.04	1.71	4.41	3.19	6.92	7.76	4.41	3.19
April.....	2.21	1.46	.50	.44	1.97	1.86	4.68	3.76	7.45	5.21	4.68	3.76
May.....	2.20	1.40	.50	.39	5.59	3.07	8.29	4.86	3.98	3.41	3.98	3.41
June.....	1.59	.90	.39	.21	5.90	10.57	7.88	11.68	2.34	2.91	2.34	2.91
July.....	1.14	.99	.24	.33	9.48	6.89	10.86	8.21	2.78	4.12	2.78	4.12
August.....	1.23	.....	.38	.....	7.66	.....	9.27	.....	3.69	.....	3.69	.....
September.....	1.29	.....	.33	.....	7.42	.....	9.04	.....	3.83	.....	3.83	.....
October.....	1.19	.....	.25	.....	5.39	.....	6.83	.....	4.02	.....	4.02	.....
November.....	.81	.....	.16	.....	3.80	.....	4.77	.....	5.95	.....	4.77	.....
December.....	.88	.....	.17	.....	3.69	.....	4.74	.....	3.43	.....	3.43	.....
Average.....	1.52	.....	.40	.....	5.09	.....	7.01	.....	5.22	.....	5.22	.....
Boots and shoes:												
January.....	1.97	1.23	.78	.37	1.27	1.88	4.02	3.48	5.97	4.48	4.02	3.48
February.....	1.93	1.27	.70	.31	1.37	1.23	4.00	2.81	3.09	5.88	3.09	2.81
March.....	2.00	1.58	.65	.50	1.34	1.16	3.99	3.24	3.18	4.92	3.18	2.92
April.....	2.48	1.97	.68	.42	2.13	1.53	5.29	3.92	2.76	4.34	2.76	3.92
May.....	2.06	1.57	.53	.49	2.47	2.37	5.06	4.43	3.19	4.95	3.19	4.43
June.....	1.94	1.61	.47	.40	1.82	1.85	4.23	3.86	3.78	5.18	3.78	3.86
July.....	2.04	2.27	.57	.53	1.76	1.40	4.37	4.20	4.74	7.16	4.37	4.20
August.....	2.19	.....	.73	.....	2.84	.....	5.76	.....	4.08	.....	4.08	.....
September.....	2.01	.....	.51	.....	2.78	.....	5.30	.....	2.99	.....	2.99	.....
October.....	1.71	.....	.47	.....	2.73	.....	4.91	.....	2.05	.....	2.05	.....
November.....	1.00	.....	.27	.....	4.38	.....	5.65	.....	2.41	.....	2.41	.....
December.....	1.03	.....	.24	.....	3.88	.....	5.15	.....	3.66	.....	3.66	.....
Average.....	1.86	.....	.55	.....	2.40	.....	4.81	.....	3.49	.....	3.30	.....
Brick:												
April.....	.....	.86	.....	.61	.....	4.01	.....	5.48	.....	8.68	.....	5.48
May.....	.....	1.77	.....	.66	.....	8.65	.....	11.08	.....	7.89	.....	7.89
June.....	.....	.80	.....	.44	.....	5.45	.....	6.69	.....	6.67	.....	6.67
July.....	.....	.93	.....	.50	.....	7.90	.....	9.33	.....	6.02	.....	6.02
Cotton manufacturing:												
January.....	2.07	1.00	.65	.40	2.16	2.60	4.88	4.00	4.50	3.57	4.50	3.57
February.....	1.98	1.00	.60	.34	1.92	1.87	4.50	3.21	3.33	3.91	3.33	3.21
March.....	2.27	1.36	.69	.36	2.20	2.00	5.16	3.72	4.17	4.47	4.17	4.32
April.....	2.40	1.64	.68	.43	2.23	2.52	5.31	4.59	4.27	4.69	4.27	4.59
May.....	2.36	1.53	.55	.37	2.07	2.30	4.98	4.20	3.95	3.51	3.95	3.51
June.....	2.06	1.25	.58	.46	2.17	2.24	4.81	3.95	3.25	2.66	3.25	3.06
July.....	1.91	1.48	.55	.40	3.34	3.07	5.80	4.95	2.47	4.62	2.47	4.42
August.....	1.58	.....	.46	.....	3.58	.....	5.62	.....	2.72	.....	2.72	.....
September.....	1.88	.....	.46	.....	2.44	.....	4.78	.....	4.58	.....	4.58	.....
October.....	1.41	.....	.48	.....	2.09	.....	3.68	.....	4.34	.....	3.98	.....
November.....	1.22	.....	.35	.....	2.18	.....	3.75	.....	2.93	.....	2.93	.....
December.....	.58	.....	.24	.....	1.92	.....	2.74	.....	1.46	.....	1.46	.....
Average.....	1.81	.....	.52	.....	2.36	.....	4.69	.....	3.50	.....	3.47	.....
Foundries and machine shops:												
January.....	.....	.52	.....	.22	.....	2.32	.....	3.06	.....	2.93	.....	2.93
February.....	1.36	.55	.80	.22	2.03	2.10	4.19	2.87	4.39	2.96	4.19	2.87
March.....	1.88	.90	.88	.25	3.24	2.72	6.00	3.87	4.63	3.38	4.63	3.38
April.....	1.88	.96	.80	.36	2.87	3.29	5.55	4.61	3.95	3.08	3.95	3.08
May.....	1.87	.77	.79	.25	4.12	4.91	6.78	5.93	3.76	2.44	3.76	2.44
June.....	1.29	.69	.54	.25	4.52	4.44	6.35	5.38	3.05	1.95	3.05	1.95
July.....	1.11	.68	.43	.20	4.58	4.71	6.12	5.50	2.26	2.63	2.26	2.63
August.....	1.01	.....	.45	.....	4.08	.....	5.54	.....	2.56	.....	2.56	.....
September.....	1.07	.....	.44	.....	3.82	.....	5.33	.....	2.45	.....	2.45	.....
October.....	.85	.....	.47	.....	4.01	.....	5.33	.....	2.27	.....	2.27	.....
November.....	.66	.....	.22	.....	2.87	.....	3.75	.....	1.85	.....	1.85	.....
December.....	.55	.....	.26	.....	3.10	.....	3.91	.....	2.05	.....	2.05	.....
Average.....	1.23	.....	.55	.....	3.57	.....	5.35	.....	3.02	.....	3.02	.....

TABLE 2.—AVERAGE LABOR TURNOVER RATES IN SPECIFIED INDUSTRIES—Continued

A.—Monthly Rates—Continued

Industry and month	Separation rates								Accession rate		Net turn-over rate	
	Quit		Discharge		Lay-off		Total					
	1930	1931	1930	1931	1930	1931	1930	1931	1930	1931	1930	1931
Furniture:												
January		0.55		0.25		4.84		5.64		5.24		5.24
February		.57		.34		3.86		4.77		5.51		4.77
March		.80		.37		4.52		5.69		4.78		4.78
April	1.73	.95	.64	.51	4.38	3.31	6.75	4.77	3.34	4.66	3.34	4.66
May	1.26	1.05	.52	.25	4.39	5.72	6.17	7.02	2.87	3.81	2.87	3.81
June	1.44	1.06	.41	.43	4.33	4.83	6.18	6.32	3.82	4.89	3.82	4.89
July	1.21	.81	.40	.30	4.50	3.83	6.11	4.94	5.09	5.62	5.09	4.94
August	1.18		.41		3.45		5.04		5.34		5.04	
September	1.09		.46		3.30		4.85		7.07		4.85	
October	1.03		.45		3.61		5.09		3.72		3.72	
November	.99		.29		5.92		7.20		2.48		2.48	
December	.68		.35		6.66		7.69		2.35		2.35	
Average	1.18		.44		4.50		6.12		4.01		4.01	
Iron and steel:												
January	1.81	.71	.45	.09	1.24	1.36	3.50	2.16	5.52	2.52	3.50	2.16
February	1.91	.72	.34	.15	1.15	1.03	3.40	1.90	5.09	2.24	3.40	1.90
March	1.91	.71	.45	.12	1.22	1.38	3.58	2.21	4.06	2.03	3.58	2.03
April	2.26	.89	.42	.15	1.32	1.90	4.00	2.94	3.88	1.69	3.88	1.69
May	2.13	.87	.40	.15	1.71	2.16	4.24	3.18	3.25	1.57	3.25	1.57
June	1.87	.86	.49	.11	2.25	2.65	4.61	3.62	2.56	1.20	2.56	1.20
July	1.54	.94	.24	.12	2.29	1.74	4.07	2.80	2.27	2.32	2.27	2.32
August	1.61		.26		2.05		3.92		1.91		1.91	
September	1.45		.22		2.16		3.83		2.32		2.32	
October	1.13		.20		2.25		3.58		1.74		1.74	
November	1.11		.13		1.95		3.19		1.31		1.31	
December	.82		.10		2.23		3.15		1.40		1.40	
Average	1.63		.31		1.82		3.76		2.94		2.94	
Men's clothing:												
April		1.40		.12		2.20		3.72		3.22		3.22
May		1.39		.15		1.46		3.00		3.10		3.00
June		1.32		.23		.56		2.11		4.05		2.11
July		1.12		.23		.97		2.32		4.16		2.32
Sawmills:												
January	3.80	.97	1.18	.43	4.52	8.02	9.50	9.42	9.39	9.99	9.39	9.42
February	3.39	1.22	1.37	.50	3.99	4.56	8.75	6.28	9.11	7.44	8.75	6.28
March	3.89	1.74	1.47	.51	3.54	4.56	8.90	6.81	7.91	7.07	7.91	6.81
April	4.28	1.79	.92	.46	4.97	7.17	10.17	9.42	9.66	7.21	9.66	7.21
May	3.51	1.73	1.35	.50	8.10	6.43	12.96	8.66	10.09	7.97	10.09	7.97
June	2.93	1.13	.96	.33	5.35	8.70	9.24	10.16	5.85	6.41	5.85	6.41
July	2.68	1.35	1.07	.32	6.98	5.35	10.73	7.02	6.17	4.53	6.17	4.53
August	3.01		.93		6.09		10.03		6.71		6.71	
September	2.99		.95		7.64		11.58		6.93		6.93	
October	2.26		.72		6.58		9.56		8.32		8.32	
November	1.93		.83		7.23		9.99		4.96		4.96	
December	1.39		.93		7.42		9.74		4.51		4.51	
Average	3.01		1.06		6.03		10.10		7.47		7.47	
Slaughtering and meat packing:												
January	2.32	1.29	.91	.61	6.68	4.40	9.91	6.30	10.02	9.50	9.91	6.30
February	2.37	1.56	.96	.68	7.70	6.48	11.03	8.72	7.39	5.02	7.39	5.02
March	2.49	1.41	.86	.37	7.51	6.88	10.86	8.66	5.23	5.19	5.23	5.19
April	2.91	1.42	.75	.47	4.47	5.02	8.13	6.91	8.47	6.31	8.13	6.31
May	2.84	1.35	.79	.43	4.14	4.13	7.77	5.91	9.01	6.92	7.77	5.91
June	2.72	1.36	.88	.52	4.59	3.90	8.19	5.78	10.34	6.08	8.19	5.78
July	2.03	1.38	.79	.49	5.34	5.59	8.21	7.46	6.92	6.46	6.92	6.46
August	2.09		.72		5.14		7.95		6.34		6.34	
September	2.26		.65		3.79		6.70		7.33		6.70	
October	1.70		.73		4.67		7.10		7.62		7.10	
November	1.12		.56		4.80		6.48		7.30		6.48	
December	1.69		.57		5.59		7.85		6.24		6.24	
Average	2.22		.76		5.37		8.35		7.68		7.68	

TABLE 2.—AVERAGE LABOR TURNOVER RATES IN SPECIFIED INDUSTRIES—(Continued)

B.—Equivalent Annual Rates

Industry and month	Separation rates								Accession rate		Net turn-over rate	
	Quit		Discharge		Lay-off		Total		1930	1931	1930	1931
	1930	1931	1930	1931	1930	1931	1930	1931				
Automobiles:												
January	32.5	6.4	10.8	2.1	68.4	31.0	111.7	39.5	158.9	34.4	111.7	34.4
February	15.1	9.6	5.0	2.7	30.1	22.3	50.2	34.6	61.8	53.7	50.2	34.6
March	21.3	12.8	6.6	4.6	24.0	20.1	51.9	37.5	81.4	91.3	51.9	37.5
April	26.9	17.8	6.1	5.4	24.0	22.6	57.0	45.8	90.7	63.4	57.0	45.8
May	25.9	16.5	5.9	4.6	65.8	36.1	97.6	57.2	46.8	40.1	46.8	40.1
June	19.4	11.0	4.7	2.6	71.8	128.6	95.9	142.2	28.5	35.4	28.5	35.4
July	13.4	11.7	2.8	3.9	111.6	81.1	127.8	96.7	32.7	48.5	32.7	48.5
August	14.5	—	4.5	—	90.2	—	109.2	—	43.4	—	43.4	—
September	15.7	—	4.0	—	90.3	—	110.0	—	46.6	—	46.6	—
October	14.0	—	2.9	—	63.4	—	80.3	—	47.3	—	47.3	—
November	9.9	—	1.9	—	46.2	—	58.0	—	72.4	—	58.0	—
December	10.4	—	2.0	—	43.4	—	55.8	—	40.4	—	40.4	—
Average	18.3	—	4.8	—	60.8	—	83.8	—	62.6	—	62.6	—
Boots and shoes:												
January	23.2	14.5	9.2	4.4	14.9	22.1	47.3	41.0	70.3	52.7	47.3	41.0
February	25.2	16.6	9.1	4.0	17.9	16.0	52.2	36.6	40.3	76.7	40.3	36.6
March	23.5	18.6	7.7	5.9	15.8	13.7	47.0	38.2	37.4	57.9	37.4	38.2
April	30.2	24.0	8.3	5.1	25.9	18.6	64.4	47.7	33.6	52.8	33.6	47.7
May	24.2	18.5	6.2	5.8	29.1	27.9	59.5	52.2	37.5	58.3	37.5	52.2
June	23.6	19.6	5.7	4.9	22.1	22.5	51.4	47.0	46.0	63.0	46.0	47.0
July	24.0	26.7	6.7	6.2	20.7	16.5	51.4	49.4	55.8	84.3	51.4	49.4
August	25.8	—	8.6	—	33.4	—	67.8	—	48.0	—	48.0	—
September	24.5	—	6.2	—	33.8	—	64.5	—	36.4	—	36.4	—
October	20.1	—	5.5	—	32.1	—	57.7	—	24.1	—	24.1	—
November	12.2	—	3.3	—	53.3	—	68.8	—	29.3	—	29.3	—
December	12.1	—	2.8	—	45.7	—	60.6	—	43.1	—	43.1	—
Average	22.4	—	6.6	—	28.7	—	57.7	—	41.8	—	41.8	—
Brick:												
April	—	10.5	—	7.4	—	48.8	—	66.7	—	105.6	—	66.7
May	—	20.8	—	7.8	—	101.8	—	130.4	—	92.9	—	92.9
June	—	9.7	—	5.4	—	66.3	—	81.4	—	81.2	—	81.2
July	—	10.9	—	5.9	—	93.0	—	109.8	—	70.9	—	70.9
Cotton manufacturing:												
January	24.4	11.8	7.7	4.7	25.4	30.6	57.5	47.1	53.0	42.0	53.0	42.0
February	25.8	13.0	7.8	4.4	25.0	24.4	58.6	41.8	43.4	51.0	43.4	41.8
March	26.7	16.0	8.1	4.2	25.9	23.5	60.7	43.7	49.1	52.6	49.1	43.7
April	29.2	20.0	8.3	5.2	27.1	30.7	64.6	55.9	52.0	57.1	52.0	55.9
May	27.8	18.0	6.5	4.4	24.4	27.1	58.7	49.5	46.5	41.3	46.5	41.3
June	25.1	15.2	7.1	5.6	26.4	27.3	58.6	48.1	39.6	44.5	39.6	44.5
July	22.5	17.4	6.5	4.7	39.3	36.1	68.3	58.2	29.1	54.4	29.1	54.4
August	18.6	—	5.4	—	42.1	—	66.1	—	32.0	—	32.0	—
September	22.9	—	5.6	—	29.7	—	58.2	—	55.7	—	55.7	—
October	16.6	—	5.6	—	24.6	—	46.8	—	51.1	—	46.8	—
November	14.8	—	4.3	—	26.5	—	45.6	—	35.7	—	35.7	—
December	6.8	—	2.8	—	22.6	—	32.2	—	17.2	—	17.2	—
Average	21.8	—	6.3	—	28.3	—	56.3	—	42.0	—	41.7	—
Foundries and machine shops:												
January	—	6.1	—	2.6	—	27.3	—	36.0	—	34.5	—	34.5
February	17.7	7.2	10.4	2.9	26.5	27.4	54.6	37.5	57.2	38.6	54.6	37.5
March	22.1	10.6	10.4	2.9	38.1	32.0	70.6	45.5	54.5	39.8	54.5	39.8
April	22.9	11.7	9.7	4.4	34.9	40.0	67.5	56.1	48.1	37.5	48.1	37.5
May	22.0	9.1	9.3	2.9	48.5	57.8	79.8	69.8	44.3	28.7	44.3	28.7
June	15.7	8.4	6.6	3.0	55.0	54.0	77.3	65.4	37.1	23.7	37.1	23.7
July	13.1	8.0	5.1	2.4	53.9	55.4	72.1	65.8	26.6	31.0	26.6	31.0
August	11.9	—	5.3	—	48.0	—	65.2	—	30.1	—	30.1	—
September	13.0	—	5.4	—	46.5	—	64.9	—	29.8	—	29.8	—
October	10.0	—	5.5	—	47.2	—	62.7	—	26.7	—	26.7	—
November	8.0	—	2.7	—	34.9	—	45.6	—	22.5	—	22.5	—
December	6.5	—	3.1	—	36.5	—	46.1	—	24.1	—	24.1	—
Average	14.8	—	6.7	—	42.7	—	64.2	—	36.5	—	36.5	—

TABLE 2.—AVERAGE LABOR TURNOVER RATES IN SPECIFIED INDUSTRIES—Continued

B.—Equivalent Annual Rates—Continued

Industry and month	Separation rates								Accession rate		Net turn-over rate	
	Quit		Discharge		Lay-off		Total		1930	1931	1930	1931
	1930	1931	1930	1931	1930	1931	1930	1931				
Furniture:												
January		6.5		2.9		57.0		66.4		61.7		61.7
February		7.4		4.4		50.3		62.1		71.9		62.1
March		9.4		4.4		53.2		67.0		56.3		56.3
April	21.1	11.6	7.8	6.2	53.3	40.3	82.2	58.1	40.6	56.7	40.6	56.7
May	14.8	12.4	6.1	2.9	51.6	67.3	72.5	82.6	33.8	44.8	33.8	44.8
June	17.5	12.9	5.0	5.2	52.7	58.8	75.2	76.9	46.5	59.5	46.5	59.5
July	14.2	9.5	4.7	3.5	53.0	45.1	71.9	58.1	59.9	66.1	59.9	58.1
August	13.9		4.8		40.6		59.3		62.9		59.3	
September	13.3		5.6		40.2		59.1		86.0		59.1	
October	12.1		5.3		42.5		59.9		43.8		43.8	
November	12.0		3.5		72.0		87.5		30.2		30.2	
December	8.0		4.1		78.4		90.5		27.7		27.7	
Average	14.1		5.2		53.8		73.1		47.9		47.9	
Iron and steel:												
January	21.3	8.4	5.3	1.1	14.6	16.0	41.2	25.5	65.0	29.7	41.2	25.5
February	24.9	9.4	4.4	2.0	15.0	13.4	44.3	24.8	66.4	29.2	44.3	24.8
March	22.5	8.4	5.3	1.4	14.4	16.2	42.2	26.0	47.8	23.9	42.2	23.9
April	27.5	10.8	5.1	1.8	16.1	23.1	48.7	35.7	47.2	20.6	47.2	20.6
May	25.1	10.2	4.7	1.8	20.1	25.4	49.9	37.4	38.3	18.5	38.3	18.5
June	22.8	10.5	6.0	1.3	27.4	32.3	56.2	44.1	31.2	14.6	31.2	14.6
July	18.1	11.1	2.8	1.4	27.0	20.5	47.9	33.0	26.7	27.3	26.7	27.3
August	18.9		3.1		24.1		46.1		22.5		22.5	
September	17.6		2.7		26.3		46.6		28.2		28.2	
October	13.3		2.4		26.5		42.2		20.5		20.5	
November	13.5		1.6		23.7		38.8		15.9		15.9	
December	9.7		1.2		26.2		37.1		16.5		16.5	
Average	19.6		3.7		21.8		45.1		35.5		35.5	
Men's clothing:												
April		17.0		1.5		26.8		45.3		39.2		39.2
May		16.4		1.8		17.2		35.4		36.5		35.4
June		16.1		2.8		6.8		25.7		49.3		25.7
July		13.2		2.7		11.4		27.3		49.0		27.3
Sawmills:												
January	44.7	11.4	13.9	5.1	53.2	94.4	111.8	110.9	110.5	117.6	110.5	110.9
February	44.2	15.9	17.9	6.5	52.0	59.5	114.1	81.9	118.8	97.0	114.1	81.9
March	45.8	20.5	17.3	6.0	41.7	53.7	104.8	80.2	93.1	83.2	93.1	80.2
April	52.1	21.8	11.2	5.6	60.5	87.3	123.8	114.7	117.6	87.7	117.6	87.7
May	41.3	20.4	15.9	5.9	95.3	75.7	152.5	102.0	118.8	93.8	118.8	93.8
June	35.7	13.8	11.7	4.0	65.1	105.9	112.5	123.7	71.2	78.0	71.2	78.0
July	31.5	15.9	12.6	3.8	82.2	63.0	126.3	82.7	72.6	53.3	72.6	53.3
August	35.4		10.9		71.7		118.0		79.0		79.0	
September	36.4		11.6		93.0		141.0		84.3		84.3	
October	26.6		8.5		77.4		112.5		97.9		97.9	
November	23.5		10.1		88.0		121.6		60.4		60.4	
December	16.4		10.9		87.3		114.6		53.1		53.1	
Average	36.1		12.7		72.3		121.1		89.8		89.8	
Slaughtering and meat packing:												
January	27.3	15.2	10.7	7.2	78.6	51.8	116.6	74.2	117.9	111.8	116.6	74.2
February	30.9	20.3	12.5	8.9	100.4	84.5	143.8	113.7	96.4	65.5	96.4	65.5
March	29.3	16.6	10.1	4.4	88.4	81.0	127.8	102.0	61.6	61.1	61.6	61.1
April	35.4	17.3	9.1	5.7	54.4	61.1	98.9	84.1	103.1	76.8	98.9	76.8
May	33.4	15.9	9.3	5.1	48.7	48.6	91.4	69.6	106.0	81.4	91.4	69.6
June	33.1	16.6	10.7	6.3	55.9	47.5	99.7	70.4	125.8	74.0	99.7	70.4
July	24.5	16.2	9.3	5.8	62.9	65.8	96.7	87.8	81.4	76.0	81.4	76.0
August	24.6		8.5		60.5		93.6		74.6		74.6	
September	27.5		7.9		46.1		81.5		89.2		81.5	
October	20.0		8.6		55.0		83.6		89.7		83.6	
November	13.6		6.8		58.4		78.8		88.8		78.8	
December	19.9		6.7		65.8		92.4		73.4		73.4	
Average	26.6		9.2		64.6		100.4		92.3		92.3	

HOUSING

Building Permits in Principal Cities, July, 1931

REPORTS of building permits issued have been received by the Bureau of Labor Statistics from 338 identical cities, having a population of 25,000 or over, for the months of June and July, 1931, and from 289 identical cities for the months of July, 1930, and July, 1931.

The cost figures as shown in the following tables apply to the cost of the buildings as estimated by the prospective builder on applying for his permit to build. No land costs are included. Only building projects within the corporate limits of the cities enumerated are shown. The States of Illinois, Massachusetts, New York, New Jersey, and Pennsylvania, through their departments of labor, are cooperating with the United States Bureau of Labor Statistics in the collection of these data.

Table 1 shows the estimated cost of new residential buildings, of new nonresidential buildings, and of total building operations in 338 identical cities of the United States, by geographic divisions.

TABLE 1.—ESTIMATED COST OF NEW BUILDINGS AND OF TOTAL BUILDING CONSTRUCTION IN 338 IDENTICAL CITIES, AS SHOWN BY PERMITS ISSUED IN JUNE AND JULY, 1931, BY GEOGRAPHIC DIVISIONS

Geographic division	New residential buildings				New nonresidential buildings (estimated cost)		Total construction, including alterations and repairs (estimated cost)	
	Estimated cost		Families provided for in new dwellings					
	June, 1931	July, 1931	June, 1931	July, 1931	June, 1931	July, 1931	June, 1931	July, 1931
New England.....	\$3,208,170	\$3,644,085	605	612	\$3,794,199	\$7,977,913	\$9,686,140	\$14,432,729
Middle Atlantic.....	19,603,186	13,418,155	4,277	2,945	13,654,798	21,811,833	38,506,255	41,776,379
East North Central.....	5,024,560	4,918,024	987	925	8,037,216	6,157,918	16,414,038	13,971,961
West North Central.....	2,214,023	2,032,320	592	516	4,000,844	2,458,433	7,891,757	5,671,662
South Atlantic.....	2,982,800	2,802,312	653	691	4,394,922	6,133,958	9,555,893	10,729,968
South Central.....	2,668,065	2,264,211	711	681	3,427,886	6,432,440	7,153,278	9,601,656
Mountain and Pacific.....	5,688,277	5,069,015	1,676	1,474	7,259,371	7,205,657	15,453,925	14,729,840
Total.....	41,389,081	34,148,122	9,501	7,844	45,169,236	58,178,152	104,721,286	110,914,195
Per cent of change.....		-17.5		-17.4		+28.8		+5.9

The estimated cost of total building operations in these 338 cities for the month of July, 1931, was \$110,914,195, which is 5.9 per cent more than the estimated cost of buildings for which permits were issued during the month of June, 1931. Permits issued for new residential buildings showed a decrease of 17.5 per cent in indicated expenditure. However, permits issued for new nonresidential buildings showed an increase of 28.8 per cent.

In these 338 cities, 7,844 family dwelling units were provided in the new buildings for which permits were issued during the month of July, 1931. This is 17.4 per cent less than the number of family dwelling units provided in new buildings in these cities during the month of June, 1931. An increase of 13.6 per cent was shown in the

indicated expenditure for new residential buildings in the New England States. Each of the other geographic divisions registered decreases in expenditures for this class of building. The decreases ranged from 2.1 per cent in the East North Central States to 31.6 per cent in the Middle Atlantic States. Increases in indicated expenditures for new nonresidential buildings are shown in the New England States, the Middle Atlantic States, the South Atlantic States, and the South Central States. Decreases in projected expenditure for new nonresidential buildings are shown in the East North Central States, the West North Central States, and the Middle Pacific States. The increases ranged from 39.6 per cent in the South Atlantic States to 110.3 per cent in the New England States. The decreases ranged from seven-tenths of 1 per cent in the Mountain and Pacific States to 46.6 per cent in the West North Central States. Increases in expenditures for total building operations were shown in the New England States, the Middle Atlantic States, the South Atlantic States, and the South Central States. Decreases were shown in the East North Central States, the West North Central States, and the Mountain and Pacific States. Of the geographic divisions registering increases, the Middle Atlantic States showed the smallest percentage of increase—8.3 per cent. The largest percentage of increase was registered in the New England States, 49 per cent. Decreases in the number of family dwelling units provided occurred in each of the geographic divisions except the New England and the South Atlantic, where there was an increase of 1.2 per cent and 5.8 per cent, respectively. The decreases ranged from 4.2 per cent in the South Central States to 31.1 per cent in the Middle Atlantic States.

Table 2 shows the estimated cost of additions, alterations, and repairs, as shown by permits issued, together with the percentage of increase or decrease in July, 1931, as compared with June, 1931, in 338 identical cities of the United States, by geographic divisions.

TABLE 2.—ESTIMATED COST OF ADDITIONS, ALTERATIONS, AND REPAIRS IN 338 IDENTICAL CITIES AS SHOWN BY PERMITS ISSUED IN JUNE AND JULY, 1931, BY GEOGRAPHIC DIVISIONS

Geographic division	Estimated cost		Per cent of increase or decrease in July compared with June
	June, 1931	July, 1931	
New England.....	\$2,683,771	\$2,810,731	+4.7
Middle Atlantic.....	5,308,271	6,546,391	+23.3
East North Central.....	3,352,262	2,896,019	-13.6
West North Central.....	1,076,890	1,180,909	+9.7
South Atlantic.....	2,178,171	1,793,698	-17.7
South Central.....	1,057,327	905,005	-14.4
Mountain and Pacific.....	2,506,277	2,455,168	-2.0
Total.....	18,162,969	18,587,921	+2.3

Permits issued in these 338 cities show an increase of 2.3 per cent in the total estimated cost of repairs, additions, and alterations during the month of July, 1931, as compared with the month of June, 1931. Increases in projected expenditures for repairs were shown in the New England States, the Middle Atlantic States, and the West North Central States. The other four geographic divisions show decreases in this class of building.

Table 3 shows the index numbers of families provided for and the index numbers of indicated expenditures for new residential, new nonresidential, for additions, alterations, and repairs, and for total building operations. These indexes are worked on the chain system, with the monthly average of 1929 equaling 100.

TABLE 3.—INDEX NUMBERS OF FAMILIES PROVIDED FOR AND OF THE ESTIMATED COST OF BUILDING OPERATIONS AS SHOWN BY PERMITS ISSUED IN PRINCIPAL CITIES OF THE UNITED STATES, JANUARY, 1930, TO JULY, 1931, INCLUSIVE

[Monthly average, 1929=100]

Month	Families provided for	Estimated cost of—			
		New resi- dential buildings	New nonres- idential buildings	Additions, alterations, and repairs	Total build- ing opera- tions
1930					
January.....	34.2	29.4	64.3	55.1	46.1
February.....	43.0	34.7	51.8	57.5	44.1
March.....	57.1	47.2	87.1	77.5	66.4
April.....	62.0	51.0	100.1	81.8	73.8
May.....	59.6	48.5	90.7	84.5	69.3
June.....	54.4	45.1	82.5	74.6	63.3
July.....	49.9	44.1	86.7	77.4	64.8
August.....	48.7	43.4	67.2	58.6	54.4
September.....	51.3	44.4	73.8	64.2	58.2
October.....	58.3	44.9	53.5	58.1	49.7
November.....	52.9	42.5	54.4	37.8	46.3
December.....	45.0	37.6	64.3	53.5	50.1
1931					
January.....	39.1	30.8	43.4	55.5	38.9
February.....	40.3	30.3	43.8	48.6	37.9
March.....	53.4	40.7	76.4	58.0	57.1
April.....	64.6	48.6	73.9	65.2	60.6
May.....	51.7	39.8	58.5	53.0	48.8
June.....	43.4	33.4	41.7	56.5	39.4
July.....	35.8	27.6	53.7	57.8	41.7

The index number of new residential buildings stood at 27.6 for July, 1931. The July, 1931, index number of new residential buildings is lower than for any month of 1930, or for any of the previous months of 1931. The July, 1931, index number of new nonresidential buildings is higher than for June, 1931, but lower than for July, 1930. The index number of total building operations for the month of July, 1931, was 41.7. This is 2.3 points higher than the index number for June, 1931, but 23.1 points lower than for July, 1930.

Table 4 shows the value of contracts let for public buildings by the different agencies of the United States Government during the months of June, 1931, and July, 1931, by geographic divisions.

TABLE 4.—CONTRACTS LET FOR PUBLIC BUILDINGS BY DIFFERENT AGENCIES OF THE UNITED STATES GOVERNMENT DURING JUNE AND JULY, 1931, BY GEOGRAPHIC DIVISIONS

Geographic division	June, 1931	July, 1931
New England.....	\$1, 201, 064	\$337, 228
Middle Atlantic.....	867, 109	659, 826
East North Central.....	1, 211, 009	569, 083
West North Central.....	165, 963	254, 238
South Atlantic.....	4, 196, 442	2, 128, 246
South Central.....	1, 241, 636	3, 242, 303
Mountain and Pacific.....	2, 712, 194	1, 984, 100
Total.....	11, 595, 417	9, 175, 024

Government contracts were let during the month of July, 1931, for buildings to cost \$9,175,024. These contracts were let by the following Federal agencies: United States Capitol Architect; the Office of the Quartermaster General, War Department; Bureau of Yards and Docks, Navy Department; Supervising Architect, Treasury Department; and the United States Veterans' Bureau.

Table 5 shows the value of contracts awarded by the different State governments for public buildings during the months of June, 1931, and July, 1931, by geographic divisions.

TABLE 5.—CONTRACTS AWARDED FOR PUBLIC BUILDINGS BY THE DIFFERENT STATE GOVERNMENTS DURING JUNE AND JULY, 1931, BY GEOGRAPHIC DIVISIONS

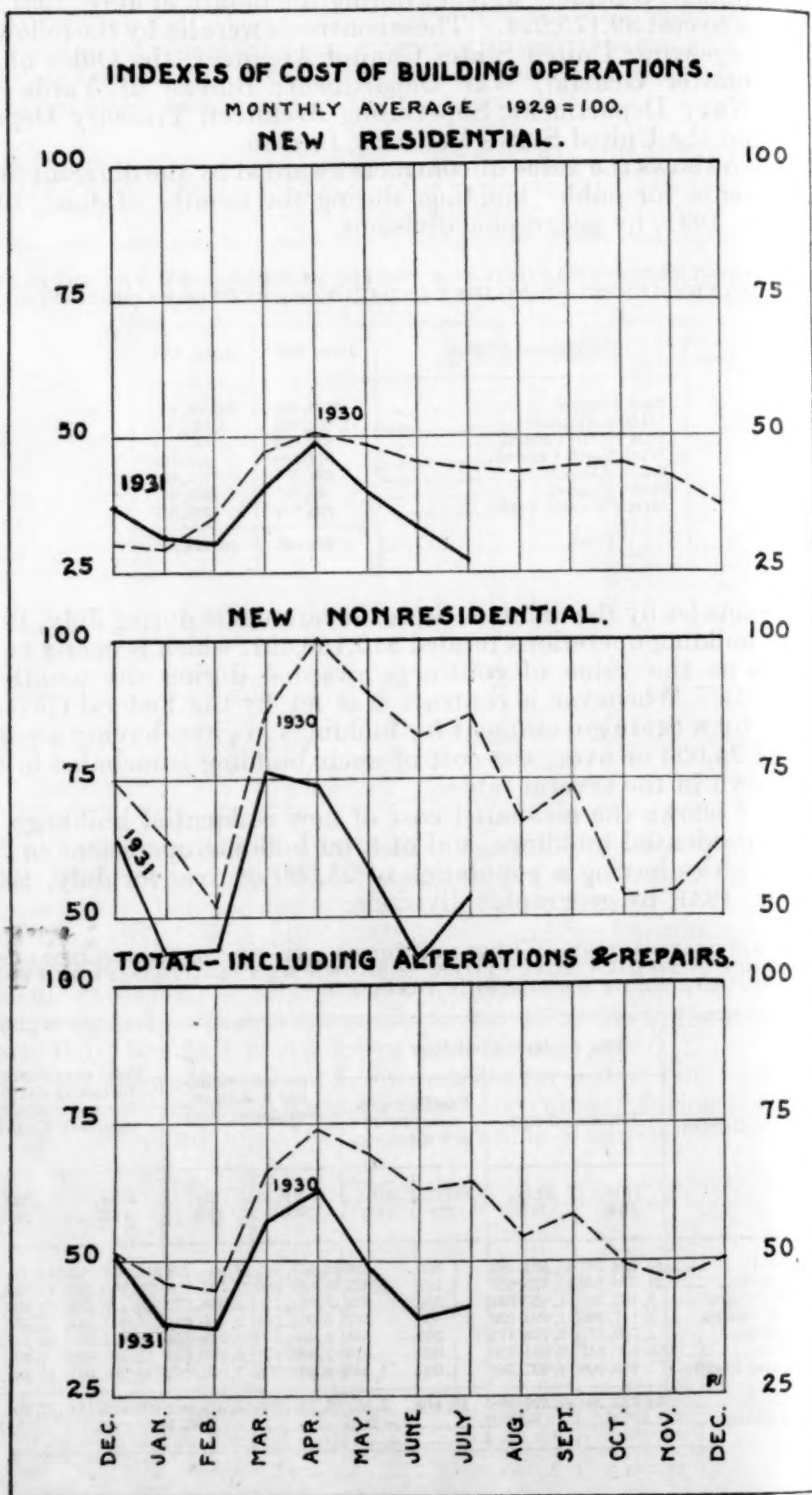
Geographic division	June, 1931	July, 1931
New England.....	\$175, 601	\$3, 598, 023
Middle Atlantic.....	2, 056, 025	4, 542, 542
East North Central.....	828, 090	167, 011
West North Central.....	914, 390	484, 900
South Atlantic.....	981, 568	177, 661
South Central.....	47, 787	881, 047
Mountain and Pacific.....	230, 634	338, 317
Total.....	5, 234, 095	10, 189, 501

Contracts let by the different State Governments during July, 1931, for new building operations totaled \$10,189,501, which is nearly twice as much as the value of contracts awarded during the month of June, 1931. Whenever a contract was let by the Federal Government or by a State government for buildings in cities having a population of 25,000 or over, the cost of such building is included in the costs shown in the several tables.

Table 6 shows the estimated cost of new residential buildings, of new nonresidential buildings, and of total building operations in 289 identical cities having a population of 25,000 or over for July, 1930, and July, 1931, by geographic divisions.

TABLE 6.—ESTIMATED COST OF NEW BUILDINGS AND OF TOTAL BUILDING CONSTRUCTION IN 289 IDENTICAL CITIES, AS SHOWN BY PERMITS ISSUED IN JULY, 1930, AND JULY, 1931, BY GEOGRAPHIC DIVISIONS

Geographic division	New residential buildings				New nonresidential buildings (estimated cost)		Total construction, including alterations and repairs (estimated cost)	
	Estimated cost		Families provided for in new dwellings					
	July, 1930	July, 1931	July, 1930	July, 1931	July, 1930	July, 1931	July, 1930	July, 1931
New England.....	\$3, 928, 265	\$3, 501, 385	665	596	\$6, 877, 443	\$7, 966, 228	\$14, 073, 122	\$14, 241, 129
Middle Atlantic.....	24, 376, 422	13, 325, 655	4, 107	2, 925	38, 684, 885	21, 747, 758	71, 800, 333	41, 556, 660
East North Central.....	7, 432, 387	4, 457, 034	1, 550	832	15, 651, 128	5, 818, 772	29, 196, 374	12, 802, 452
West North Central.....	3, 147, 198	1, 993, 620	605	507	5, 235, 764	2, 456, 658	9, 814, 244	5, 576, 437
South Atlantic.....	2, 763, 375	2, 739, 472	560	668	5, 406, 130	6, 049, 598	10, 041, 504	10, 537, 531
South Central.....	3, 829, 845	2, 084, 356	1, 002	616	7, 495, 970	6, 275, 023	12, 748, 490	9, 095, 759
Mountain and Pacific.....	7, 245, 708	4, 427, 586	1, 960	1, 343	6, 441, 575	7, 063, 025	16, 299, 047	13, 887, 526
Total.....	52, 723, 200	32, 529, 108	10, 449	7, 487	85, 792, 895	57, 377, 062	163, 973, 114	107, 697, 494
Per cent of change.....		-38.3		-28.3		-33.1		-34.3



The estimated cost of total building operations for which permits were issued in these 289 identical cities during the month of July, 1931, showed a decrease of 34.3 per cent as compared with the estimated cost of buildings for which permits were issued during the month of July, 1930. New residential buildings show a decrease of 38.3 per cent in estimated cost, and new nonresidential buildings, a decrease of 33.1 per cent in estimated cost, comparing these two periods. The number of family dwelling units provided for in new buildings decreased 28.3 per cent.

Decreases in new residential buildings were shown in each of the seven geographic divisions. The decreases ranged from nine-tenths of 1 per cent in the South Atlantic States to 45.6 per cent in the South Central States. Increases in projected expenditures for new nonresidential buildings occurred in the New England States, the South Atlantic States, and the Mountain and Pacific States. The other four geographic divisions showed decreases. Increases in total building construction were shown in the New England States and in the South Atlantic States. Decreases occurred in each of the other geographic divisions. There were decreases in the number of families provided for in all districts except the South Atlantic States.

Table 7 shows the estimated cost of additions, alterations, and repairs, as shown by permits issued, together with the percentage of increase or decrease in July, 1931, as compared with July, 1930, in 289 identical cities, by geographic divisions.

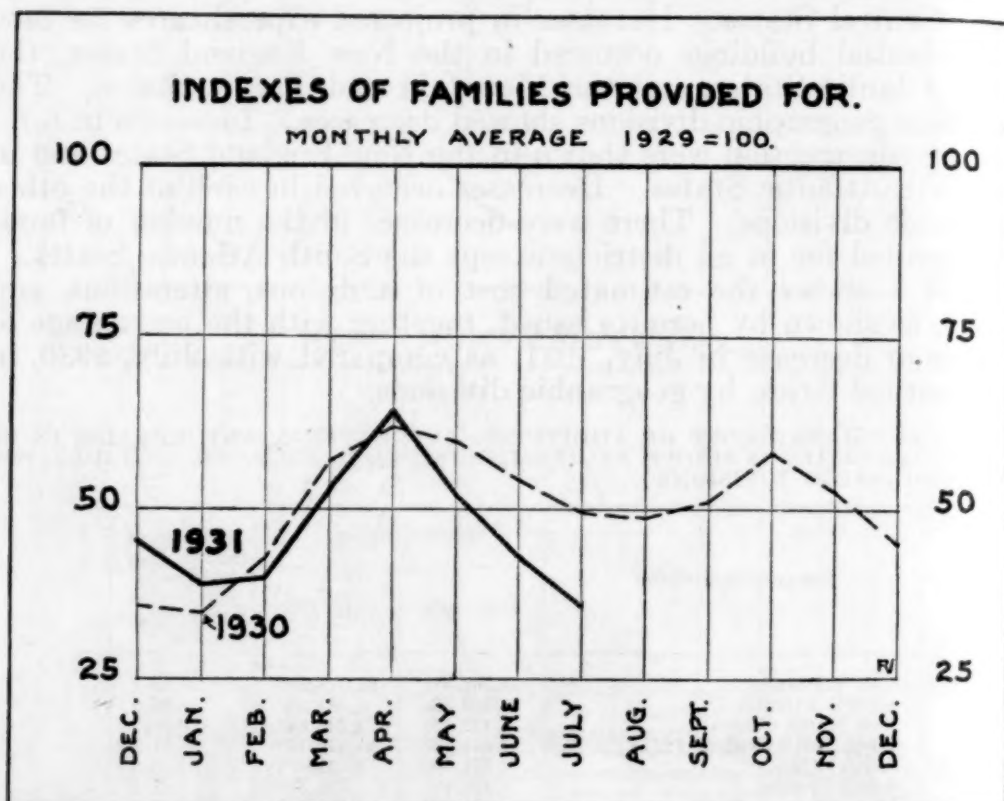
TABLE 7.—ESTIMATED COST OF ADDITIONS, ALTERATIONS, AND REPAIRS IN 289 IDENTICAL CITIES AS SHOWN BY PERMITS ISSUED IN JULY, 1930, AND JULY, 1931, BY GEOGRAPHIC DIVISIONS

Geographic division	Estimated cost		Per cent of change, July, 1931, compared with July, 1930
	July, 1930	July, 1931	
New England.....	\$3, 267, 414	\$2, 773, 516	-15. 1
Middle Atlantic.....	8, 739, 026	6, 483, 247	-25. 8
East North Central.....	6, 112, 859	2, 526, 646	-58. 7
West North Central.....	1, 431, 282	1, 126, 159	-21. 3
South Atlantic.....	1, 871, 999	1, 748, 461	-6. 6
South Central.....	1, 422, 675	736, 380	-48. 2
Mountain and Pacific.....	2, 611, 764	2, 396, 915	-8. 2
Total.....	25, 457, 019	17, 791, 324	-30. 1

There was a decrease of 30.1 per cent in the estimated cost of repairs to old buildings for which permits were issued during the month of July, 1931, as compared with the month of July, 1930. All geographic divisions showed decreases in the estimated cost of repairs. The smallest decrease occurred in the South Atlantic States and the largest in the East North Central States.

Table 8 shows the estimated cost of new residential buildings, of new nonresidential buildings, and of total building operations, together with the number of families provided for in new buildings in 338 identical cities for June, 1931, and July, 1931. Reports were received from 51 cities in the New England States; 66 cities in the Middle Atlantic States; 92 cities in the East North Central States; 25 cities in the West North Central States; 37 cities in the South Atlantic States; 32 cities in the South Central States; and 35 cities in the Mountain and Pacific States.

Permits were issued for the following important building projects during the month of July, 1931: In New Haven, Conn., a permit was issued for a divinity school to cost \$1,500,000; in Cambridge, Mass., for a laboratory to cost \$700,000; in Providence, R. I., for a second section of the Providence County Court House to cost \$1,277,508; in Elizabeth, N. J., for a court house and jail to cost nearly \$1,500,000; in Philadelphia, Pa., for a new railroad station and office building to cost \$10,000,000; in Pittsburgh, Pa., for an office building to cost \$1,150,000; in Evanston, Ill., for a public library to cost \$1,100,000; and in Baltimore, Md., for a public library to cost \$2,225,000. In Huntington, W. Va., a contract was let by the United States Veterans'



Bureau for a hospital to cost over \$750,000. The Supervising Architect of the Treasury Department let a contract for a post office and Federal court house in Louisville, Ky., to cost over \$1,500,000; for a Federal office building in Seattle, Wash., to cost \$1,294,000; and for a post office in Fort Worth, Tex., to cost nearly \$1,100,000.

No reports were received from New London, Conn.; Bangor, Me.; Bayonne and Irvington, N. J.; Erie and Nanticoke, Pa.; Rock Island, Ill.; Port Huron, Mich.; Newark and Zanesville, Ohio; University City, Mo.; Jacksonville and West Palm Beach, Fla.; Lynchburg, Va.; Fort Smith, Ark.; Lexington, Ky.; Meridian, Miss.; Muskogee, Okla.; Corpus Christi, Galveston, Laredo, Port Arthur, and San Angelo, Tex.; Riverside, Calif.; and Salem, Oreg.

TABLE 8.—ESTIMATED COST OF BUILDINGS FOR WHICH PERMITS WERE ISSUED IN PRINCIPAL CITIES, JUNE AND JULY, 1931

New England States

State and city	New residential buildings				New nonresidential buildings (estimated cost)		Total construction, including alterations and repairs (estimated cost)	
	Estimated cost		Families provided for in new dwellings		June, 1931	July, 1931	June, 1931	July, 1931
	June, 1931	July, 1931	June, 1931	July, 1931				
Connecticut:								
Bridgeport.....	\$223,900	\$126,900	55	34	\$44,578	\$33,163	\$292,858	\$175,688
Bristol.....	9,500	6,000	2	1	2,060	5,275	17,490	11,275
Greenwich.....	167,000	188,500	13	11	51,700	4,450	289,200	219,100
Hartford.....	54,400	35,500	11	7	358,648	332,136	993,566	466,634
Meriden.....	4,800	52,300	1	7	1,938	2,744	22,417	71,029
New Britain.....	0	16,500	0	3	12,900	174,200	35,679	216,586
New Haven.....	65,000	101,550	11	15	1,013,775	1,506,325	1,190,437	1,691,030
Norwalk.....	87,000	104,300	15	17	8,875	7,020	210,167	125,670
Stamford.....	81,000	65,800	13	6	9,950	1,375	108,430	77,875
Torrington.....	21,000	6,000	5	2	4,435	800	28,215	13,130
Waterbury.....	34,200	47,500	11	12	4,600	75,615	52,525	150,615
Maine:								
Lewiston.....	19,400	9,500	6	2	19,200	14,500	40,200	42,000
Portland.....	47,750	63,810	9	17	426,005	16,541	503,086	101,099
Massachusetts:								
Beverly.....	15,800	107,700	3	7	5,310	4,110	34,810	121,695
Boston ¹	553,100	608,000	129	146	1,104,305	1,844,789	2,124,833	2,913,124
Brockton.....	29,400	47,000	7	6	7,145	15,025	51,385	72,815
Brookline.....	24,300	265,500	3	12	9,150	4,000	53,601	322,905
Cambridge.....	85,500	111,000	12	4	12,380	939,225	233,433	1,069,990
Chelsea.....	7,100	17,100	2	4	35,500	100	54,340	23,800
Chicopee.....	8,000	16,100	3	3	186,789	9,100	197,514	39,250
Everett.....	14,000	13,800	4	5	5,700	706,250	58,700	743,550
Fall River.....	3,200	0	1	0	1,750	53,135	9,342	73,905
Fitchburg.....	10,500	15,750	3	3	3,065	1,715	14,965	92,195
Haverhill.....	6,500	500	4	1	5,765	2,975	27,247	14,440
Holyoke.....	22,000	8,000	2	1	1,100	6,550	36,050	34,800
Lawrence.....	14,000	9,500	3	2	8,700	170,042	39,645	204,273
Lowell.....	22,100	9,000	5	2	77,935	7,200	122,690	29,695
Lynn.....	34,300	267,400	7	25	27,095	6,960	143,865	321,305
Malden.....	36,800	64,400	7	13	8,842	101,820	63,992	196,990
Medford.....	127,500	102,700	24	22	16,715	15,650	155,775	122,442
New Bedford.....	13,000	0	3	0	7,900	11,950	38,250	31,125
Newton.....	290,700	265,500	32	31	16,885	27,225	361,885	329,855
Pittsfield.....	98,100	99,700	19	19	13,220	195,510	329,535	303,110
Quincy.....	89,500	91,000	32	17	12,635	9,500	144,432	120,747
Revere.....	2,500	13,500	1	3	10,060	5,450	18,735	23,700
Salem.....	36,000	26,500	6	6	9,900	44,800	95,500	100,815
Somerville.....	22,000	11,500	6	4	20,005	2,325	57,825	48,490
Springfield.....	74,370	104,800	16	24	18,550	27,975	105,645	170,234
Taunton.....	6,500	3,900	2	2	3,615	3,625	19,126	14,212
Waltham.....	50,800	45,800	8	9	3,675	4,075	63,365	149,868
Watertown.....	182,000	20,500	13	4	12,500	56,240	203,200	91,780
Worcester.....	204,450	101,700	32	23	22,595	21,510	257,414	164,515
New Hampshire:								
Concord.....	0	23,000	0	6	2,000	1,500	9,500	45,500
Manchester.....	10,500	17,600	6	9	71,030	3,330	132,164	50,332
Rhode Island:								
Central Falls.....	19,700	0	6	0	3,400	2,170	39,985	4,945
Cranston.....	72,100	79,500	15	17	7,625	8,250	81,450	95,075
East Providence.....	20,300	54,775	4	12	3,935	5,585	42,623	87,925
Newport.....	16,500	12,500	4	3	4,850	10,200	33,050	30,860
Pawtucket.....	27,000	52,700	6	6	6,550	18,910	42,030	82,880
Providence.....	143,100	130,000	23	26	62,600	1,451,183	386,555	2,713,366
Woonsocket.....	0	2,000	0	1	4,759	3,810	17,414	14,490
Total.....	3,208,170	3,644,085	605	612	3,794,199	7,977,913	9,686,140	14,432,729
Per cent of change.....		+13.6		+1.2		+110.3		+49.0

¹ Applications filed.

TABLE 8.—ESTIMATED COST OF BUILDINGS FOR WHICH PERMITS WERE ISSUED IN PRINCIPAL CITIES, JUNE AND JULY, 1931—Continued

Middle Atlantic States

State and city	New residential buildings				New nonresidential buildings (estimated cost)		Total construction, including alterations and repairs (estimated cost)	
	Estimated cost		Families provided for in new dwellings					
	June, 1931	July, 1931	June, 1931	July, 1931	June, 1931	July, 1931	June, 1931	July, 1931
New Jersey:								
Atlantic City.....	\$4,750	\$74,000	2	10	\$31,900	\$18,620	\$80,127	\$126,698
Belleville.....	29,500	50,000	9	14	9,575	3,425	50,875	53,425
Bloomfield.....	75,000	110,000	16	26	4,000	17,500	85,500	129,100
Camden.....	4,800	21,500	1	11	9,275	5,800	28,790	39,665
Clifton.....	123,600	117,300	28	21	26,000	71,350	162,400	191,850
East Orange.....	9,000	40,000	4	5	14,500	15,700	52,427	97,015
Elizabeth.....	47,000	44,000	4	8	55,000	1,435,500	102,000	1,484,500
Garfield.....	0	4,500	0	1	1,450	2,050	12,925	23,900
Hoboken.....	0	0	0	0	0	2,000	9,043	29,950
Jersey City.....	55,000	36,000	11	13	185,155	99,510	276,505	184,035
Kearney.....	14,000	24,500	3	6	1,875	4,294	20,750	32,909
Montclair.....	49,950	79,500	6	8	24,700	14,264	77,350	109,382
Newark.....	175,600	74,500	34	12	302,875	740,425	629,311	1,066,183
New Brunswick.....	6,000	0	1	0	7,050	9,160	100,551	20,226
Orange.....	5,670	21,250	1	2	48,597	28,500	68,357	60,006
Passaic.....	7,500	24,500	1	6	5,400	10,650	34,730	69,610
Paterson.....	9,000	47,200	2	8	196,245	17,487	261,324	115,216
Perth Amboy.....	5,770	5,500	1	1	1,550	4,100	15,568	25,194
Plainfield.....	66,400	73,500	9	10	4,050	4,900	89,409	120,441
Trenton.....	61,500	5,750	12	2	18,425	9,445	101,195	163,294
Union City.....	42,000	0	24	0	1,250	1,800	62,135	23,360
West New York.....	0	0	0	0	0	1,300	6,885	9,225
New York:								
Albany.....	141,000	119,800	16	14	224,206	382,773	447,464	605,962
Amsterdam.....	26,000	12,000	2	2	15,000	11,030	41,700	26,680
Auburn.....	16,500	29,500	3	2	3,125	8,535	23,680	42,715
Binghamton.....	50,550	51,200	14	9	11,191	14,122	130,347	103,803
Buffalo.....	477,900	292,850	156	102	451,226	561,967	1,028,329	933,817
Elmira.....	8,500	16,500	2	5	418,380	10,330	444,400	39,025
Jamestown.....	11,900	7,700	3	2	4,035	22,475	22,910	46,687
Kingston.....	11,500	24,000	3	5	312,103	7,517	331,108	59,382
Lockport.....	17,500	0	4	0	31,565	7,800	55,300	11,350
Mount Vernon.....	201,000	123,500	20	11	953,650	44,700	1,192,450	224,020
Newburgh.....	6,000	28,500	1	5	936,011	42,400	663,450	74,550
New Rochelle.....	226,500	205,380	12	11	1,950	3,955	259,215	269,305
New York—								
The Bronx ¹	3,166,950	976,900	729	267	1,593,200	1,613,990	5,142,795	2,957,051
Brooklyn ¹	4,288,325	2,934,700	1,132	631	1,281,230	1,403,630	6,577,030	5,251,515
Manhattan ¹	1,650,000	506,300	96	90	1,838,875	500,000	4,824,660	2,347,621
Queens ¹	5,502,850	3,317,050	1,376	736	1,761,376	443,454	7,700,014	4,151,323
Richmond ¹	648,550	437,980	169	128	25,670	112,555	745,422	996,818
Niagara Falls.....	54,200	69,200	12	15	47,025	12,990	133,282	121,147
Poughkeepsie.....	41,800	44,200	7	6	250	250	62,140	74,750
Rochester.....	82,200	87,250	15	16	427,498	1,737,915	703,556	1,959,449
Schenectady.....	39,000	18,800	8	3	24,750	17,250	90,200	103,525
Syracuse.....	134,300	91,400	25	17	200,953	187,775	372,413	541,015
Troy.....	71,150	79,850	14	11	35,100	3,700	114,450	108,410
Utica.....	18,000	31,750	4	6	5,975	18,530	50,500	75,455
Watertown.....	20,500	12,000	3	2	3,300	1,335	30,864	26,114
White Plains.....	276,000	524,337	19	144	9,800	5,800	295,500	588,937
Yonkers.....	387,850	994,775	43	187	51,850	90,020	503,540	1,147,825
Pennsylvania:								
Allentown.....	75,000	1,200	14	1	25,075	2,900	107,375	41,200
Altoona.....	17,875	0	5	0	5,380	53,997	35,017	63,729
Bethlehem.....	5,000	11,000	1	2	11,490	51,850	21,415	72,250
Butler.....	0	0	0	0	1,200	0	1,200	0
Chester.....	2,500	2,500	1	1	5,550	6,275	10,225	11,675
Easton.....	13,500	5,800	1	1	9,370	11,675	28,310	20,261
Harrisburg.....	11,000	55,500	1	10	10,550	15,350	53,000	140,625
Hazleton.....	24,416	0	5	0	8,270	7,485	54,764	14,484
Johnstown.....	0	3,000	0	1	9,925	1,950	28,325	12,630
Lancaster.....	15,500	24,000	3	6	47,110	1,100	100,715	55,285
McKeesport.....	51,000	27,500	5	7	115,125	2,225	183,617	39,185
New Castle.....	6,000	13,200	1	2	3,275	2,670	17,155	17,120
Norristown.....	29,000	57,400	5	13	70,241	52,725	107,799	117,861
Philadelphia.....	532,200	598,500	80	80	1,163,250	10,452,500	2,055,185	11,504,555
Pittsburgh.....	344,800	625,300	69	209	283,135	1,191,170	939,042	1,994,202
Reading.....	7,600	38,000	3	5	65,935	50,800	96,370	131,044

¹ Applications filed.

TABLE 8.—ESTIMATED COST OF BUILDINGS FOR WHICH PERMITS WERE ISSUED
IN PRINCIPAL CITIES, JUNE AND JULY, 1931—Continued*Middle Atlantic States—Continued*

State and city	New residential buildings				New nonresidential buildings (estimated cost)		Total construction, including alterations and repairs (estimated cost)	
	Estimated cost		Families provided for in new dwellings					
	June, 1931	July, 1931	June, 1931	July, 1931	June, 1931	July, 1931	June, 1931	July, 1931
Pennsylvania—Con.								
Scranton.....	\$25, 100	\$23, 433	8	7	\$16, 870	\$67, 935	\$79, 265	\$195, 297
Wilkes-Barre.....	4, 800	5, 800	2	2	138, 795	6, 950	169, 876	137, 996
Wilkesburg.....	24, 000	0	5	0	4, 950	15, 595	47, 100	22, 791
Williamsport.....	10, 730	600	5	1	5, 384	1, 703	25, 219	22, 046
York.....	34, 600	34, 500	6	6	35, 752	30, 400	89, 805	107, 708
Total.....	19, 603, 186	13, 418, 155	4, 277	2, 945	13, 654, 798	21, 811, 833	38, 566, 255	41, 776, 379
Per cent of change.....		-31. 6		-31. 1		+59. 7		+8. 3

East North Central States

Illinois:								
Alton.....	\$29,300	\$4,700	2	2	\$33,460	\$4,275	\$77,171	\$50,941
Aurora.....	16,425	26,800	4	4	1,850	19,299	35,758	72,479
Belleville.....	51,600	20,800	11	8	500	1,900	62,000	23,600
Berwyn.....	6,000	51,600	1	8	2,975	2,305	13,475	310,055
Bloomington.....	5,000	0	1	0	2,000	1,000	10,000	5,000
Chicago.....	442,700	521,150	74	65	846,550	956,975	1,773,820	1,985,512
Cicero.....	14,800	35,800	2	4	25,985	606,400	44,360	646,185
Danville.....	7,600	7,400	2	3	2,050	1,500	74,385	10,500
Decatur.....	26,200	9,000	5	2	3,775	2,525	33,625	17,625
East St. Louis.....	18,800	47,000	7	19	173,060	7,779	215,775	63,679
Elgin.....	15,600	10,790	3	2	2,200	4,500	37,869	34,109
Evanston.....	49,000	26,000	4	2	18,000	1,252,750	207,500	1,327,750
Granite City.....	0	0	0	0	350	0	350	300
Joliet.....	8,000	15,000	1	1	265,919	13,325	290,160	48,296
Maywood.....	0	0	0	0	825	165,935	4,505	170,232
Moline.....	19,400	37,150	4	8	3,215	14,370	49,496	69,841
Oak Park.....	10,000	37,000	1	3	3,715	41,085	32,465	84,835
Peoria.....	118,100	98,400	26	20	5,650	4,325	140,550	114,815
Quincy.....	9,000	8,500	2	4	1,209,630	1,780	1,220,855	12,280
Rockford.....	31,500	25,000	8	7	2,050	7,590	63,425	46,645
Springfield.....	91,782	65,300	26	15	528,385	15,490	636,586	112,588
Waukegan.....	119,000	24,000	7	5	23,950	12,150	149,050	49,300
Indiana:								
Anderson.....	28,060	12,685	4	4	1,750	2,068	40,782	28,610
East Chicago.....	0	9,000	0	2	20,515	54,498	29,296	69,298
Elkhart.....	4,000	9,000	2	1	955	1,335	17,159	17,404
Evansville.....	23,250	37,600	7	12	38,300	133,895	86,637	192,619
Fort Wayne.....	69,050	79,750	15	18	179,198	9,390	269,940	108,977
Gary.....	7,000	9,600	3	4	2,475	5,255	13,240	30,225
Hammond.....	17,030	0	4	0	51,513	422,319	73,603	429,019
Indianapolis.....	178,200	208,800	40	46	256,766	132,531	489,659	415,458
Kokomo.....	0	0	0	0	1,300	2,297	3,650	6,131
Lafayette.....	17,000	6,800	9	2	245,760	5,044	267,560	14,044
Marion.....	9,500	1,500	5	1	3,750	780	34,182	4,505
Michigan City.....	0	20,300	0	4	1,335	10,275	77,405	31,573
Mishawaka.....	0	2,100	0	2	600	1,975	4,415	4,995
Muncie.....	24,000	3,900	9	5	2,320	900	42,105	11,585
Richmond.....	6,950	6,000	3	3	250	8,500	7,200	21,200
South Bend.....	18,800	8,750	6	2	13,270	2,600	46,145	34,495
Terre Haute.....	0	3,000	0	1	8,880	21,605	18,995	51,355
Michigan:								
Ann Arbor.....	79,200	20,200	9	3	65,500	26,594	167,435	68,627
Battle Creek.....	2,500	47,800	1	7	20,595	8,220	34,230	58,758
Bay City.....	25,500	13,000	7	3	316,700	40,800	353,735	61,415
Dearborn.....	69,600	70,900	16	17	2,050	34,978	77,660	107,528
Detroit.....	1,039,365	700,794	201	138	522,658	661,534	2,047,471	1,567,187
Flint.....	46,393	60,685	12	13	20,706	68,536	106,184	157,866
Grand Rapids.....	40,900	30,050	11	9	78,525	26,500	154,480	73,375
Hamtramck.....	0	0	0	0	725	6,700	17,735	11,260
Highland Park.....	0	8,500	0	1	825	23,000	4,745	36,425
Jackson.....	0	10,600	0	2	81,165	13,310	86,443	34,700
Kalamazoo.....	19,100	23,500	6	5	101,572	1,820	132,167	41,524
Lansing.....	11,000	11,500	3	2	11,660	99,125	38,450	119,875
Muskegon.....	12,600	7,800	5	3	1,700	1,417	20,150	17,420

TABLE 8.—ESTIMATED COST OF BUILDINGS FOR WHICH PERMITS WERE ISSUED IN PRINCIPAL CITIES, JUNE AND JULY, 1931—Continued

East North Central States—Continued

State and city	New residential buildings				New nonresidential buildings (estimated cost)		Total construction, including alterations and repairs (estimated cost)	
	Estimated cost		Families provided for in new dwellings		June, 1931	July, 1931	June, 1931	July, 1931
	June, 1931	July, 1931	June, 1931	July, 1931				
Michigan—Con.								
Pontiac.....	0	0	0	\$0	\$29,875	\$10,025	\$33,725	\$15,290
Saginaw.....	\$4,700	\$13,900	2	4	8,470	5,183	26,899	30,863
Wyandotte.....	4,500	19,800	1	5	7,245	2,580	19,395	26,680
Ohio:								
Akron.....	46,950	87,250	11	16	123,601	44,399	235,781	158,864
Ashtabula.....	6,200	0	2	0	31,270	1,085	42,237	7,085
Canton.....	18,000	13,000	5	3	4,535	21,160	41,375	50,075
Cincinnati.....	691,245	737,750	119	120	823,855	111,540	1,598,565	974,105
Cleveland.....	159,500	253,500	28	51	992,300	46,200	1,423,475	605,250
Cleveland Heights.....	103,500	78,000	26	10	3,315	17,965	112,415	98,640
Columbus.....	97,900	188,200	18	20	68,150	157,550	197,100	438,150
Dayton.....	47,900	58,000	11	13	126,951	26,674	226,717	118,757
East Cleveland.....	0	0	0	0	90	405	1,895	2,451
Elyria.....	3,500	6,000	1	2	11,550	15,475	17,650	22,622
Hamilton.....	8,800	13,450	2	2	7,075	27,720	21,709	44,180
Lakewood.....	48,000	29,000	6	2	52,495	3,295	102,605	35,920
Lima.....	0	0	0	0	4,300	750	9,775	9,070
Lorain.....	13,000	11,500	4	3	1,665	25,885	17,665	42,605
Mansfield.....	45,500	32,900	4	7	1,875	15,285	49,203	53,261
Marion.....	0	0	0	0	1,360	175	1,585	748
Massillon.....	6,500	4,000	1	1	1,115	7,825	12,770	12,925
Middletown.....	0	0	0	0	2,450	875	6,385	2,925
Norwood.....	4,000	0	1	0	700	9,995	14,710	12,470
Portsmouth.....	300	0	1	0	1,995	5,515	4,188	7,580
Springfield.....	57,500	7,500	5	2	3,210	1,500	69,890	64,575
Steubenville.....	0	35,400	0	8	40,325	650	43,450	39,350
Toledo.....	75,800	28,900	16	7	123,910	74,608	255,819	137,898
Warren.....	7,850	4,450	2	1	4,790	21,435	17,345	34,705
Youngstown.....	24,900	40,000	5	11	5,850	11,720	229,893	144,968
Wisconsin:								
Appleton.....	71,300	36,700	14	8	32,865	3,575	106,215	45,900
Eau Claire.....	10,700	10,900	5	3	35,600	6,900	61,500	38,975
Fond du Lac.....	16,600	23,700	4	3	9,990	900	27,565	27,650
Green Bay.....	44,500	39,000	13	9	39,900	45,000	93,775	96,689
Kenosha.....	15,400	6,400	3	1	89,695	1,500	110,186	19,580
Madison.....	89,000	55,400	16	11	5,595	132,735	123,698	206,447
Milwaukee.....	378,300	435,200	75	74	113,593	311,575	918,435	1,037,005
Oshkosh.....	2,400	12,280	2	5	10,507	3,700	21,274	21,215
Racine.....	18,600	46,800	3	8	2,225	5,625	77,474	56,032
Sheboygan.....	34,200	26,500	6	5	3,872	8,170	59,387	68,901
Superior.....	5,000	14,000	2	4	3,645	1,225	14,415	19,070
West Allis.....	13,700	53,140	4	14	4,995	3,880	29,855	58,465
Total.....	5,024,560	4,918,024	987	925	8,037,216	6,157,918	16,414,038	13,971,961
Per cent of change.....		-2.1		-6.3		-23.4		-14.9

West North Central States

Iowa:								
Burlington.....	\$3,000	\$6,075	1	2	\$8,750	\$1,100	\$35,250	\$9,925
Cedar Rapids.....	60,600	64,400	19	18	148,412	103,435	221,627	212,797
Council Bluffs.....	14,000	5,000	5	2	1,900	28,000	17,700	37,300
Davenport.....	43,600	54,105	10	14	51,150	35,856	111,037	129,391
Des Moines.....	106,900	97,575	53	20	181,690	24,453	354,890	161,378
Dubuque.....	11,400	17,400	3	6	2,505	5,667	22,556	34,192
Ottumwa.....	28,400	38,250	8	8	7,425	28,500	39,925	76,700
Sioux City.....	26,500	83,300	8	32	8,785	29,700	115,135	116,425
Waterloo.....	22,900	30,900	11	13	3,400	8,540	38,105	44,590
Kansas:								
Hutchinson.....	23,500	7,500	6	3	11,585	40,995	45,750	50,855
Kansas City.....	11,950	55,550	7	19	3,820	6,470	21,980	70,200
Topeka.....	39,000	36,950	10	7	16,385	5,280	68,570	49,170
Wichita.....	85,050	72,750	21	15	256,240	170,945	359,202	255,720
Minnesota:								
Duluth.....	35,750	47,200	8	11	10,245	11,815	71,902	98,399
Minneapolis.....	356,170	392,025	94	86	150,590	539,265	627,195	1,108,510
St. Paul.....	193,740	106,140	35	22	3,004,056	224,659	3,197,796	438,425

TABLE 8.—ESTIMATED COST OF BUILDINGS FOR WHICH PERMITS WERE ISSUED IN PRINCIPAL CITIES, JUNE AND JULY, 1931—Continued

West North Central States—Continued

State and city	New residential buildings				New nonresidential buildings (estimated cost)		Total construction, including alterations and repairs (estimated cost)	
	Estimated cost		Families provided for in new dwellings		June, 1931	July, 1931	June, 1931	July, 1931
	June, 1931	July, 1931	June, 1931	July, 1931				
Missouri:								
Joplin.....	\$6,000	\$5,000	3	8	\$1,500	\$7,050	\$13,246	\$20,301
Kansas City.....	152,500	100,000	36	32	430,100	60,700	1,034,500	307,200
St. Joseph.....	6,300	3,750	4	2	1,955	3,675	26,740	12,745
St. Louis.....	630,500	485,600	147	120	222,010	414,850	968,830	1,245,649
Springfield.....	17,300	9,400	7	5	3,150	51,895	29,100	65,995
Nebraska:								
Lincoln.....	75,650	56,500	18	11	46,855	195,575	135,960	258,285
Omaha.....	146,700	155,500	43	31	20,721	362,733	195,916	509,403
North Dakota:								
Fargo.....	20,250	38,700	5	9	5,540	1,775	29,345	95,225
South Dakota:								
Sioux Falls.....	96,363	62,750	30	20	2,075	95,500	109,500	172,875
Total.....	2,214,023	2,032,320	592	516	4,600,844	2,458,433	7,891,757	5,671,662
Per cent of change.....		-8.2		-12.8		-46.6		-28.1

South Atlantic States

Delaware:								
Wilmington.....	\$66,700	\$58,500	12	7	\$36,138	\$530,576	\$141,339	\$616,310
District of Columbia:								
Washington.....	1,184,050	1,570,375	217	363	3,426,667	550,440	5,135,164	2,574,715
Florida:								
Miami.....	36,505	64,450	18	12	31,310	55,328	197,657	169,192
Orlando.....	500	1,500	1	5	1,750	350	23,340	15,360
St. Petersburg.....	74,100	20,800	6	9	13,600	3,400	107,900	30,600
Tampa.....	5,800	4,600	5	4	9,005	50,205	39,565	115,644
Georgia:								
Atlanta.....	97,650	68,750	44	22	54,738	278,775	221,454	437,467
Augusta.....	10,050	24,987	6	9	2,476	4,378	21,165	37,603
Columbus.....	13,050	9,250	4	7	450	0	25,415	23,775
Macon.....	16,150	10,100	7	7	1,625	6,275	22,516	22,275
Savannah.....	26,600	29,300	8	8	1,475	275	48,525	68,283
Maryland:								
Baltimore.....	625,000	260,000	122	45	492,300	3,278,400	2,019,900	4,157,600
Cumberland.....	5,000	15,600	2	6	750	43,485	8,560	62,865
Hagerstown.....	23,800	11,500	7	3	2,550	1,875	36,350	20,145
North Carolina:								
Asheville.....	1,300	1,500	1	2	1,375	6,345	6,955	17,915
Charlotte.....	109,000	55,450	23	16	33,200	13,220	151,065	80,510
Durham.....	18,400	20,500	8	5	5,400	22,200	43,500	63,325
Greensboro.....	10,000	15,000	2	3	7,775	362	32,054	24,565
High Point.....	21,000	33,350	5	10	9,115	40,700	31,815	90,450
Raleigh.....	17,650	20,740	5	5	1,575	39,770	23,575	64,635
Wilmington.....	2,000	11,500	1	4	28,300	15,500	62,300	37,200
Winston-Salem.....	61,500	16,650	3	5	9,860	60,745	126,665	97,500
South Carolina:								
Charleston.....	9,850	4,900	5	3	13,350	57,350	26,775	93,025
Columbia.....	50,000	33,680	17	11	23,490	970	76,105	61,612
Greenville.....	32,500	54,300	10	11	85	3,600	36,215	62,035
Spartanburg.....	13,750	3,000	3	1	160	2,400	15,150	10,265
Virginia:								
Newport News.....	1,800	6,800	2	3	42,721	9,755	58,704	30,090
Norfolk.....	151,768	166,500	35	41	9,700	21,630	196,652	228,582
Petersburg.....	6,000	8,280	3	2	0	7,350	9,025	18,130
Portsmouth.....	2,000	10,100	1	3	320	1,115	11,920	21,435
Richmond.....	127,227	62,050	30	20	24,630	117,075	252,603	292,421
Roanoke.....	44,700	32,750	6	5	6,630	6,360	56,563	41,775
West Virginia:								
Charleston.....	97,200	7,000	26	2	2,100	129,500	99,300	155,139
Clarksburg.....	5,900	20,800	3	13	13,612	190	64,492	22,390
Huntington.....	0	4,000	0	1	64,800	752,319	69,000	759,669
Parkersburg.....	0	4,250	0	2	20,720	1,140	36,175	11,727
Wheeling.....	14,300	59,500	5	16	1,170	20,600	20,435	93,739
Total.....	2,982,800	2,802,312	653	691	4,394,922	6,133,958	9,555,893	10,729,968
Per cent of change.....		-6.1		+5.8		+39.6		+12.3

TABLE 8.—ESTIMATED COST OF BUILDINGS FOR WHICH PERMITS WERE ISSUED IN PRINCIPAL CITIES, JUNE AND JULY, 1931—Continued

South Central States

State and city	New residential buildings				New nonresidential buildings (estimated cost)		Total construction, including alterations and repairs (estimated cost)	
	Estimated cost		Families provided for in new dwellings		June, 1931	July, 1931	June, 1931	July, 1931
	June, 1931	July, 1931	June, 1931	July, 1931				
Alabama:								
Birmingham.....	\$11,600	\$34,060	7	12	\$25,976	\$64,450	\$95,672	\$144,080
Mobile.....	20,800	50,700	9	9	5,346	11,400	40,750	92,008
Montgomery.....	93,900	69,400	38	30	21,600	3,060	129,535	92,850
Arkansas: Little Rock.....	16,445	105,500	8	7	3,566	60,376	35,656	180,757
Kentucky:								
Ashland.....	0	0	0	0	640	1,300	1,090	6,550
Covington.....	8,500	17,500	2	4	15,190	14,765	36,880	117,575
Louisville.....	88,500	72,800	13	16	56,300	1,723,115	215,675	1,844,665
Newport.....	0	0	0	0	1,750	400	2,750	2,150
Paducah.....	3,300	10,250	5	3	1,800	6,200	6,536	16,450
Louisiana:								
Baton Rouge.....	23,491	13,970	6	7	3,720	35,255	39,369	57,017
Monroe.....	4,000	2,515	1	7	3,820	3,730	8,045	15,786
New Orleans.....	172,425	88,542	46	39	8,525	92,435	236,062	249,499
Shreveport.....	17,125	18,100	15	14	307,068	18,697	513,695	60,456
Oklahoma:								
Enid.....	18,000	10,700	6	5	7,960	200	37,775	15,150
Oklahoma City.....	727,300	303,500	60	51	647,165	1,398,615	1,406,665	1,732,240
Okmulgee.....	0	0	0	0	0	0	0	0
Tulsa.....	131,615	49,200	25	17	704,597	392,785	858,637	512,499
Tennessee:								
Chattanooga.....	25,001	31,900	9	14	3,447	59,846	80,771	116,108
Johnson City.....	7,700	3,500	3	1	4,950	1,500	13,225	5,800
Knoxville.....	41,760	16,200	9	6	11,112	90,324	79,752	112,374
Memphis.....	49,400	31,330	22	14	70,590	41,730	224,120	174,070
Nashville.....	90,500	109,900	16	43	185,285	74,900	300,738	209,267
Texas:								
Amarillo.....	58,225	63,700	20	20	82,268	61,202	149,283	131,656
Austin.....	93,865	98,373	48	53	23,122	94,058	148,100	218,685
Beaumont.....	19,850	900	11	1	6,270	40,130	42,217	71,347
Dallas.....	134,950	132,159	74	63	62,290	47,357	329,405	267,718
El Paso.....	48,630	47,880	17	16	13,555	10,270	73,882	69,300
Fort Worth.....	80,710	117,100	36	40	188,994	1,248,806	309,194	1,413,962
Houston.....	595,600	588,375	154	116	902,130	728,831	1,539,130	1,337,536
San Antonio.....	69,540	149,824	44	66	27,550	45,636	130,797	236,239
Waco.....	15,333	21,333	7	6	30,400	6,667	58,600	33,760
Wichita Falls.....	0	5,000	0	1	900	54,310	9,272	64,103
Total.....	2,668,065	2,264,211	711	681	3,427,886	6,432,440	7,153,278	9,601,656
Per cent of change.....		-15.1		-4.2		+87.7		+34.2

Mountain and Pacific States

Arizona:								
Phoenix.....	\$109,200	\$71,750	36	18	\$3,200	\$42,610	\$122,095	\$123,965
Tucson.....	109,550	52,300	24	15	8,466	4,855	309,780	67,349
California:								
Alameda.....	12,600	12,500	3	3	151,710	2,780	182,687	25,356
Alhambra.....	76,250	82,250	24	23	5,575	24,925	90,875	110,950
Bakersfield.....	2,800	9,500	1	2	46,265	1,793	53,850	30,178
Berkeley.....	78,000	102,688	17	16	18,353	29,897	137,378	158,173
Fresno.....	45,375	52,438	11	10	6,250	5,950	88,001	73,018
Glendale.....	209,200	209,175	49	56	35,315	15,160	250,050	234,475
Long Beach.....	230,600	155,350	90	67	35,280	164,525	321,565	373,675
Los Angeles.....	1,634,932	1,471,533	621	488	2,194,649	1,511,191	4,523,575	3,751,072
Oakland.....	271,650	208,115	68	53	296,443	96,890	633,350	467,335
Pasadena.....	94,085	95,950	24	24	227,907	45,198	645,486	282,296
Sacramento.....	169,200	128,650	35	25	40,870	102,670	288,340	274,486
San Bernardino.....	29,200	27,034	9	7	8,700	2,150	37,900	34,859
San Diego.....	242,570	179,685	61	41	101,780	104,371	429,199	357,815
San Francisco.....	1,055,125	725,797	251	226	1,021,686	901,469	2,334,600	1,801,147
San Jose.....	51,210	50,730	12	16	15,780	6,605	95,815	122,410
Santa Ana.....	0	42,520	0	8	0	15,564	0	58,084
Santa Monica.....	57,250	72,200	18	23	16,160	7,290	83,080	86,973
Stockton.....	37,000	29,200	7	8	33,861	8,765	85,036	62,315
Vallejo.....	11,500	9,150	3	3	750	61,420	17,610	78,685

TABLE 8.—ESTIMATED COST OF BUILDINGS FOR WHICH PERMITS WERE ISSUED IN PRINCIPAL CITIES, JUNE AND JULY, 1931—Continued

Mountain and Pacific States—Continued

State and city	New residential buildings				New nonresidential buildings (estimated cost)		Total construction; including alterations and repairs (estimated cost)	
	Estimated cost		Families provided for in new dwellings		June, 1931	July, 1931	June, 1931	July, 1931
	June, 1931	July, 1931	June, 1931	July, 1931				
Colorado:								
Colorado Springs.....	\$8,000	\$18,200	3	7	\$3,445	\$1,915	\$18,895	\$23,105
Denver.....	221,500	223,400	57	85	46,200	66,000	372,700	371,500
Pueblo.....	3,675	9,900	4	6	79,663	2,240	103,943	18,190
Montana:								
Butte.....	0	0	0	0	6,930	5,990	9,320	8,057
Great Falls.....	35,600	28,100	13	7	13,335	5,485	58,100	39,535
New Mexico:								
Albuquerque.....	41,000	198,750	11	12	1,125,260	75,750	1,182,970	286,795
Oregon:								
Portland.....	289,700	238,500	43	40	160,975	373,535	563,405	952,615
Utah:								
Ogden.....	17,600	22,500	9	7	1,170	2,000	20,220	30,900
Salt Lake City.....	101,400	129,500	29	57	1,368,176	92,124	1,512,488	300,263
Washington:								
Bellingham.....	5,000	9,800	3	4	17,755	10,200	26,485	26,559
Everett.....	6,500	4,000	1	1	770	715	15,445	11,100
Seattle.....	314,055	277,500	108	82	137,687	2,981,910	617,307	3,477,065
Spokane.....	72,950	71,350	17	18	10,255	280,385	131,155	383,985
Tacoma.....	44,000	49,000	14	16	18,750	151,330	91,210	225,495
Total.....	5,688,277	5,069,015	1,676	1,474	7,259,371	7,205,657	15,453,925	14,729,840
Per cent of change.....		-10.9		-12.1		-0.7		-4.7

Hawaii

Honolulu.....	\$198,411	\$180,960	103	86	\$225,101	\$52,232	\$448,940	\$262,204
Per cent of change.....		-8.8		-16.5		-76.8		-41.6

Building Operations in Principal Cities of the United States, First Half of 1931**Introduction and Summary**

REPORTS of building permits issued during the half year, January to June, inclusive, 1931, have been received by the Bureau of Labor Statistics from 93 cities in the United States having a population of 100,000 or over. The States of Illinois, Massachusetts, New Jersey, New York, and Pennsylvania, through their departments of labor, are cooperating with the United States Bureau of Labor Statistics in the collection of these data.

A brief summary of building permits issued in the first half of 1931, compared with those issued in the first half of 1930, appeared in the August, 1931, issue of the Labor Review. The entire report has now been completed and is presented in the following pages.

In studying the following tables it should be borne in mind that the costs shown are for the costs of the buildings only and do not include the costs of land. The cost is estimated by the prospective builder.

at the time of applying for his permit to build, and is recorded on his application for a building permit. Furthermore, the costs are for buildings in the corporate limits of the cities enumerated. Much building in the suburbs of large cities is therefore not included in the figures shown.

Table 1 shows the total number of new buildings and the estimated cost of the different kinds of new buildings for which permits were issued in the 93 cities from which reports were received for the first six months of 1931, the per cent that each kind forms of the total number, the per cent that the cost of each kind forms of the total cost, and the average cost per building.

In the 93 cities which, according to the 1930 census, had a population of 100,000 or over, permits were issued for 67,481 new buildings during the first six months of 1931. Of this number 27,534, or 40.8 per cent, were for residential and 39,947, or 59.2 per cent, for non-residential purposes. Of the residential buildings, by far the greater number were 1-family dwellings. More permits were issued for private garages than for any other class of nonresidential buildings. Of the more expensive classes of nonresidential buildings, the most numerous were stores.

The new buildings for which permits were issued in these 93 cities during the first half of 1931 were to cost \$532,669,164, of which 43 per cent was for new residential buildings and 57 per cent for new non-residential buildings. One-family dwellings accounted for a larger expenditure than any other class of residential buildings, while office buildings accounted for the largest expenditure in the nonresidential group. It will be noted that in these large cities over 50 per cent more was spent for the erection of amusement buildings than for the erection of churches.

Four classes of buildings shown in the table below are erected wholly or partially from money appropriated by city, State, county, or Federal governments. These four classes of buildings—institutions, public buildings, public works and utilities, and schools and libraries—accounted for an expenditure of over \$120,000,000, which is 22.5 per cent of the total estimated cost of all new buildings for which permits were issued in these 93 cities during the first half of 1931. During the first half of 1930, these four classes of buildings accounted for 20.4 per cent of the total expenditure for new buildings.

TABLE 1.—NUMBER AND COST OF NEW BUILDINGS FOR WHICH PERMITS WERE ISSUED IN 93 CITIES, JANUARY 1 TO JUNE 30, 1931, BY KIND OF BUILDING

Kind of building	Buildings for which permits were issued				
	Number	Per cent of total number	Estimated cost		
			Amount	Per cent of grand total	Average per building
<i>Residential buildings</i>					
1-family dwellings.....	23, 147	34. 3	\$111, 886, 666	21. 0	\$4, 834
2-family dwellings.....	2, 883	4. 3	20, 334, 973	3. 8	7, 053
1-family and 2-family dwellings with stores.....	202	. 3	1, 726, 624	. 3	8, 548
Multifamily dwellings.....	1, 206	1. 8	84, 302, 020	15. 8	69, 902
Multifamily dwellings with stores.....	49	. 1	6, 289, 500	1. 2	128, 357
Hotels.....	8	(¹)	871, 000	. 2	108, 875
Lodging houses.....	5	(¹)	185, 000	(¹)	37, 000
All other.....	34	. 1	3, 250, 900	. 6	95, 615
Total, residential buildings.....	27, 534	40. 8	228, 846, 683	43. 0	8, 311
<i>Nonresidential buildings</i>					
Amusement buildings.....	208	. 3	12, 397, 057	2. 3	59, 601
Churches.....	187	. 3	8, 176, 026	1. 5	43, 722
Factories and workshops.....	613	. 9	29, 721, 355	5. 6	48, 485
Public garages.....	440	. 7	6, 444, 602	1. 2	14, 647
Private garages.....	29, 525	43. 8	9, 725, 797	1. 8	329
Service stations.....	1, 474	2. 2	4, 022, 757	. 8	2, 729
Institutions.....	83	. 1	17, 400, 936	3. 3	209, 650
Office buildings.....	131	. 2	80, 333, 975	15. 1	613, 236
Public buildings.....	159	. 2	42, 251, 082	7. 9	265, 730
Public works and utilities.....	149	. 2	15, 369, 163	2. 9	103, 149
Schools and libraries.....	211	. 3	44, 979, 789	8. 4	213, 174
Sheds.....	3, 145	4. 7	1, 018, 478	. 2	324
Stables and barns.....	39	(¹)	104, 060	(¹)	2, 668
Stores and warehouses.....	2, 753	4. 1	30, 656, 946	5. 8	11, 136
All other.....	830	1. 2	1, 220, 458	. 2	1, 470
Total, nonresidential buildings.....	39, 947	59. 2	303, 822, 481	57. 0	7, 606
Grand total, all buildings.....	67, 481	100. 0	532, 669, 164	100. 0	7, 894

¹ Less than one-tenth of 1 per cent.

The last column of the table shows the average cost per building. The most expensive class of residential building was apartment houses with stores; these multifamily dwellings averaged \$128,357 per building. In the nonresidential group the most expensive class of building was office buildings. The average cost of 131 office buildings for which permits were issued in these cities was over \$600,000 per building. The average cost of public buildings was \$265,730 per building. The average cost of all buildings for which permits were issued during this period was \$7,894. Residential buildings averaged \$8,311 per building and nonresidential buildings \$7,606 per building. If however, private garages and sheds are excluded, the average cost of the remaining nonresidential buildings was \$40,275.

Building Trend 1930 and 1931

TABLE 2 shows the number and cost of each of the different kinds of buildings for which permits were issued in 92 identical cities from which reports were received, for the first half of 1930 and the first half of 1931, and the per cent of increase or decrease for the first half of 1931 as compared with the first half of 1930.

TABLE 2.—NUMBER AND COST OF NEW BUILDINGS FOR WHICH PERMITS WERE ISSUED IN 92 CITIES DURING FIRST HALF OF 1930 AND FIRST HALF OF 1931, BY KIND OF BUILDING

Kind of building	New buildings for which permits were issued during first half of—				Per cent of change, 1931, as compared with 1930	
	1930		1931			
	Number	Cost	Number	Cost	Number	Cost
<i>Residential buildings</i>						
1-family dwellings.....	24,803	\$121,242,244	23,111	\$111,736,666	-6.8	-7.8
2-family dwellings.....	3,306	26,037,973	2,883	20,334,973	-12.8	-21.9
1-family and 2-family dwellings with stores.....	509	3,866,340	202	1,726,624	-60.3	-55.3
Multifamily dwellings.....	1,390	75,926,149	1,206	84,302,020	-13.2	+11.0
Multifamily dwellings with stores.....	106	5,148,200	49	6,289,500	-53.8	+12.2
Hotels.....	30	11,501,275	8	871,000	-73.3	-92.4
Lodging houses.....	11	320,550	5	185,000	-54.5	-42.3
All other.....	57	9,882,981	34	3,250,900	-40.4	-67.1
Total, residential buildings.....	30,212	253,925,712	27,498	228,696,683	-9.0	-9.9
<i>Nonresidential buildings</i>						
Amusement buildings.....	561	14,585,542	205	12,361,057	-63.5	-15.3
Churches.....	252	14,130,330	186	8,173,026	-26.2	-42.2
Factories and workshops.....	1,089	45,599,746	610	29,666,355	-44.0	-34.9
Public garages.....	848	13,574,846	439	6,442,102	-48.2	-52.5
Private garages.....	35,383	13,423,453	29,360	9,701,742	-17.0	-27.7
Service stations.....	1,944	7,508,002	1,462	4,006,727	-24.8	-46.6
Institutions.....	92	29,363,489	83	17,400,936	-9.8	-40.7
Office buildings.....	339	85,091,641	130	80,313,975	-61.7	-5.6
Public buildings.....	151	39,171,628	158	42,248,582	+4.6	+7.8
Public works and utilities.....	184	13,688,807	149	15,369,163	-19.0	+12.3
Schools and libraries.....	271	47,993,998	211	44,979,789	-22.1	-6.3
Sheds.....	3,908	1,813,108	3,118	1,017,323	-20.2	-43.9
Stables and barns.....	94	110,063	37	100,400	-60.6	-8.7
Stores and warehouses.....	3,479	55,209,849	2,748	30,642,796	-21.0	-44.5
All other.....	1,280	1,990,896	826	1,218,308	-35.5	-38.8
Total, nonresidential buildings.....	49,875	383,255,398	39,722	303,642,341	-20.4	-20.8
Total, new buildings.....	80,087	637,181,110	67,220	532,339,024	-16.1	-16.5
Additions, alterations, and repairs.....	94,986	111,832,672	84,643	89,126,170	-10.9	-20.3
Grand total, all building.....	175,073	749,013,782	151,863	621,465,194	-13.3	-17.0

Reports were received for the first half of both 1930 and 1931 from 92 of the 93 cities having a population of 100,000 or over; no report was received from South Bend, Ind., for the first half of 1930. During the first half of 1931 there was an estimated expenditure of \$621,465,194 for building operations of all kinds in these 92 cities. This is 17.0 per cent less than the estimated expenditures for building operations during the first half of 1930. The number of buildings decreased 13.3 per cent during this period. Comparing permits issued for residential buildings in these 92 cities, it was found that there was a decrease of 9.0 per cent in number and 9.9 per cent in estimated cost during the first half of 1931 as compared with the first half of 1930. Nonresidential buildings decreased 20.4 per cent in number and 20.8 per cent in estimated cost. Additions, alterations, and repairs decreased 10.9 per cent in number and 20.3 per cent in estimated cost.

All classes of residential buildings decreased in number; these decreases ranged from 6.8 per cent for 1-family dwellings to 73.3 per cent for hotels. There was an increase in indicated expenditures for multifamily dwellings and multifamily dwellings with stores. All

other classes of residential buildings decreased in estimated cost, the decreases ranging from 7.8 per cent for 1-family dwellings to 92.4 per cent for hotels.

All classes of nonresidential buildings showed decreases in the number of buildings for which permits were issued, except public buildings which showed an increase of 4.6 per cent; the decreases ranged from 9.8 per cent for institutional buildings to 63.5 per cent for amusement buildings.

There was an increase in the amount expended for public buildings and for public works and utilities.

All other classes of nonresidential buildings showed decreases in indicated expenditures, ranging from 5.6 per cent in the case of office buildings, to 52.5 per cent in the case of public garages. Expenditures for stores, service stations, and churches also registered large decreases, comparing the first half of 1931 with the first half of 1930.

Families Provided for, 1930 and 1931

TABLE 3 shows the number and per cent of families provided for by each of the different kinds of dwellings for which permits were issued in 92 identical cities during the first half of each year.

TABLE 3.—NUMBER AND PER CENT OF FAMILIES TO BE HOUSED IN NEW DWELLINGS FOR WHICH PERMITS WERE ISSUED IN 92 IDENTICAL CITIES DURING FIRST HALF OF 1930 AND FIRST HALF OF 1931, BY KIND OF DWELLING

Kind of dwelling	Number of dwellings for which permits were issued		Families provided for			
			Number		Per cent	
	First half 1930	First half 1931	First half 1930	First half 1931	First half 1930	First half 1931
1-family dwellings.....	24, 803	23, 111	24, 803	23, 111	46. 2	43. 0
2-family dwellings.....	3, 306	2, 883	6, 612	5, 766	12. 3	10. 7
1-family and 2-family dwellings with stores.....	509	202	681	307	1. 3	. 6
Multifamily dwellings.....	1, 390	1, 206	20, 305	23, 126	37. 8	43. 1
Multifamily dwellings with stores.....	106	49	1, 334	1, 399	2. 5	2. 6
Total.....	30, 114	27, 451	53, 735	53, 709	100. 0	100. 0

During the first half of 1931, 53,709 families were provided with dwelling places in new buildings. Of this number, 43 per cent were to be housed in 1-family dwellings and 45.7 per cent in apartment houses. During the first half of 1930, 46.2 per cent of the 53,735 families provided for were to be housed in 1-family dwellings and only 40.3 per cent in multifamily dwellings. The percentage of families housed in 2-family dwellings decreased nearly 2 per cent, comparing the first half of 1931 with 1930.

Table 4 shows the number and percentage distribution of families provided for in the different kinds of dwellings in the 65 identical cities from which reports were received for the first six months of each year—1922 to 1931. For convenience, 1-family and 2-family dwellings with stores are grouped with 2-family dwellings, and multifamily dwellings with stores are grouped with multifamily dwellings.

TABLE 4.—NUMBER AND PER CENT OF FAMILIES PROVIDED FOR IN THE DIFFERENT KINDS OF DWELLINGS IN 65 IDENTICAL CITIES, FIRST HALF OF 1922 TO 1931, INCLUSIVE

Period	Number of families provided for in—				Per cent of families provided for in—		
	1-family dwellings	2-family dwellings ¹	Multi-family dwellings ²	All classes of dwellings	1-family dwellings	2-family dwellings ¹	Multi-family dwellings ²
First half of—							
1922	63, 892	32, 321	51, 006	147, 249	43. 4	22. 0	34. 6
1923	77, 875	39, 314	77, 826	195, 015	39. 9	20. 2	39. 9
1924	82, 514	50, 904	69, 619	203, 037	40. 6	25. 1	34. 3
1925	87, 783	39, 320	80, 291	207, 394	42. 3	19. 0	38. 7
1926	71, 818	26, 727	100, 201	198, 746	36. 1	13. 4	50. 4
1927	57, 899	24, 204	95, 448	177, 551	32. 6	13. 6	53. 8
1928	50, 724	19, 261	111, 268	181, 252	28. 0	10. 6	61. 2
1929	36, 237	12, 815	81, 205	130, 257	27. 8	9. 8	62. 3
1930	20, 410	6, 101	19, 930	46, 441	43. 9	13. 1	42. 9
1931	20, 334	5, 268	23, 870	49, 472	41. 1	10. 6	48. 2

¹ Includes 1-family and 2-family dwellings with stores.

² Includes multifamily dwellings with stores.

In the 65 cities under discussion there was an increase in the number of families provided for during the first half of 1931 as compared with the first half of 1930. However, the number of families provided for during the first half of 1931 was lower than the number provided for during the first half of any year from 1922 to 1929, inclusive. During the first half of 1925, the peak period, 207,394 families were provided for. The number of families provided for in 1-family dwellings and in 2-family dwellings, during the first half of 1931, was lower than for any like period since the first compilation of these figures by the bureau.

The number of families provided for in apartment houses showed an increase as compared with 1930, but was lower than for any other 6-month period under discussion. During the first half of 1931, 41.1 per cent of the total number of families accommodated were provided for in 1-family dwellings and 48.2 per cent were provided for in apartment houses. During the first half of 1929 only 27.8 per cent of the 130,257 families accommodated were provided for in 1-family dwellings and 62.3 per cent were provided for in multifamily dwellings. During that period apartment-house units reached a higher proportion of the total dwelling units provided than during any of the other like periods for which information has been gathered by the bureau.

Building Trend

TABLE 5 shows the total number and estimated cost of all buildings for which permits were issued in the 65 identical cities from which reports were received for the first half of each year, 1922 to 1931, inclusive.

TABLE 5.—NUMBER AND ESTIMATED COST OF ALL BUILDINGS FOR WHICH PERMITS WERE ISSUED IN 65 IDENTICAL CITIES, FIRST HALF OF 1922 TO 1931, INCLUSIVE

Period	Number of buildings		Estimated cost		Period	Number of buildings		Estimated cost	
	Number	Index number	Cost	Index number		Number	Index number	Cost	Index number
First half of—					First half of—				
1922.....	243, 479	100. 0	\$1,062,464,771	100. 0	1927.....	237, 853	97. 7	\$1,443,232,520	135. 8
1923.....	283, 289	116. 4	1, 418, 779, 382	133. 5	1928.....	216, 509	88. 9	1, 462, 560, 722	137. 7
1924.....	299, 769	123. 1	1, 518, 088, 421	142. 9	1929.....	182, 379	74. 9	1, 479, 460, 210	139. 2
1925.....	289, 014	118. 7	1, 620, 413, 012	152. 5	1930.....	146, 410	60. 1	679, 064, 355	63. 9
1926.....	254, 564	104. 6	1, 539, 207, 242	144. 9	1931.....	130, 127	53. 4	577, 931, 724	54. 4

Unfortunately, semiannual figures are not available through the period for more than 65 cities.

During the first half of 1931 permits were issued for 130,127 buildings in these 65 cities. This is only 53.4 per cent of the total number of buildings for which permits were issued during 1922. The peak in the number of buildings projected was reached in the first half of 1924, when permits were issued for 299,769 buildings. The estimated cost of the buildings for which permits were issued during 1931 in these 65 cities was less than for the like period for any of the 10 years for which figures are presented in this table.

During the first half of 1931 the indicated expenditure for building operations was \$577,931,724. During the first half of 1925 the expenditure planned for building projects in these 65 cities was \$1,620,413,012, or nearly three times as much as the projected amount for the first half of 1931.

Per Capita Expenditures for Buildings

TABLE 6 shows for the first half of 1931, in the 93 cities having a population of 100,000 or over, according to the 1930 census, the per capita expenditures for new buildings of all kinds, for repairs, additions, and alterations of old buildings, for the two items combined, and for new housekeeping dwellings, together with the ratio of families provided for per 10,000 population.

TABLE 6.—TOTAL AND PER CAPITA EXPENDITURES FOR NEW BUILDINGS AND FOR REPAIRS, AND FAMILIES PROVIDED FOR, 93 CITIES, IN FIRST HALF OF 1931

City and State	Expenditure for new buildings	Expenditure for repairs and additions	Total expenditures, first half of—		Population census of 1930	Families provided for		Per capita expenditure				
			1931	1930		Number	Ratio for 10,000 population	For new build- ings	For re- pairs and ad- ditions	Total	Rank of city	For house- keeping dwellings only
Akron, Ohio.....	\$628,444	\$526,219	\$1,154,663	\$6,279,578	255,040	62	2.4	\$2.46	\$2.06	\$4.53	82	\$1.15
Albany, N. Y.....	1,435,816	414,901	1,850,717	2,831,927	127,412	109	8.6	11.27	3.26	14.53	26	6.81
Atlanta, Ga.....	1,050,315	676,256	1,726,571	5,003,966	270,366	262	9.7	3.88	2.50	6.39	68	2.23
Baltimore, Md.....	1,317,200	3,732,500	15,049,700	16,653,200	804,874	1,612	20.0	14.06	4.64	18.70	15	8.10
Birmingham, Ala.....	1,032,935	390,334	1,423,269	1,514,478	259,678	54	2.1	3.98	1.50	5.48	77	.48
Boston, Mass.....	15,122,220	2,461,574	17,583,794	13,874,901	781,188	963	12.3	19.36	3.15	22.51	10	5.02
Bridgeport, Conn.....	1,422,426	257,445	1,679,871	1,398,340	146,716	238	17.6	9.70	1.75	11.45	35	6.38
Buffalo, N. Y.....	5,280,029	576,951	5,856,980	6,249,615	573,076	680	11.9	9.21	1.01	10.22	44	3.81
Cambridge, Mass.....	1,078,249	580,573	1,658,822	2,947,940	113,643	125	11.0	9.49	5.11	14.60	25	5.36
Camden, N. J.....	659,751	100,490	760,241	1,412,725	118,700	30	2.5	5.56	.85	6.41	67	.63
Canton, Ohio.....	324,665	142,401	467,066	1,076,037	104,906	16	1.5	3.09	1.36	4.45	83	.75
Chattanooga, Tenn.....	334,337	249,215	583,552	1,894,376	109,708	69	5.8	2.79	2.08	4.87	80	1.65
Chicago, Ill.....	34,490,015	3,161,180	37,651,195	41,953,917	3,376,438	697	2.1	10.21	.94	11.15	38	1.29
Cincinnati, Ohio.....	12,379,550	1,451,135	13,830,685	21,891,264	451,160	730	16.2	27.44	3.21	30.66	6	8.63
Cleveland, Ohio.....	4,236,600	3,537,700	7,774,300	13,952,225	900,429	257	2.9	4.71	3.93	8.63	53	1.55
Columbus, Ohio.....	2,065,750	286,650	2,352,400	3,053,350	290,564	228	7.8	7.11	.99	8.10	57	4.04
Dallas, Tex.....	1,866,687	657,804	2,524,491	4,130,071	290,475	585	22.5	7.17	2.53	9.69	50	4.66
Dayton, Ohio.....	1,762,589	234,555	1,997,144	3,333,157	200,982	117	5.8	8.77	1.17	9.94	47	2.40
Denver, Colo.....	3,499,500	624,500	4,124,000	3,843,500	287,861	686	23.8	12.16	2.17	14.33	27	8.56
Des Moines, Iowa.....	1,876,647	159,529	2,036,176	2,601,184	142,559	109	11.9	13.16	1.12	14.28	28	4.49
Detroit, Mich.....	14,462,347	2,124,999	16,587,346	27,486,168	1,568,662	1,528	9.7	9.21	1.35	10.57	43	4.68
Duluth, Minn.....	211,186	232,188	443,374	616,900	101,463	38	3.7	2.08	2.29	4.37	84	1.48
Elizabeth, N. J.....	590,100	(1)	590,100	1,482,400	114,589	119	10.4	5.15	(1)	5.15	79	3.78
El Paso, Tex.....	541,453	142,926	684,379	1,818,669	102,421	132	12.9	5.29	1.40	6.68	66	4.14
Erie, Pa.....	943,109	293,704	1,236,813	1,845,442	115,967	90	7.8	8.13	2.53	10.67	42	3.84
Evansville, Ind.....	624,955	85,655	710,610	947,209	102,249	63	6.2	6.11	.84	6.95	64	2.41
Fall River, Mass.....	263,964	63,242	327,206	596,126	115,274	3	3	1.77	.55	2.32	93	.07
Flint, Mich.....	1,021,924	197,312	1,219,236	2,248,444	156,492	77	4.9	6.53	1.26	7.79	59	2.45
Fort Wayne, Ind.....	1,411,606	189,789	1,601,395	1,778,669	114,946	92	8.0	12.28	1.65	13.93	30	3.77
Fort Worth, Tex.....	3,009,796	261,178	3,270,974	4,585,122	163,447	302	18.5	18.41	1.60	20.01	13	5.90
Gary, Ind.....	716,605	101,110	817,715	658,840	100,426	28	2.8	7.14	1.01	8.14	56	1.09
Grand Rapids, Mich.....	434,925	230,390	665,315	1,686,650	168,592	59	3.5	2.58	1.37	3.95	86	1.25
Hartford, Conn.....	941,998	915,831	1,857,829	3,905,980	164,072	45	2.7	5.74	5.58	11.32	36	1.29
Houston, Tex.....	6,801,831	190,243	6,992,074	8,788,267	292,352	1,135	38.8	23.27	.65	23.92	8	15.48
Indianapolis, Ind.....	3,597,304	464,499	4,061,803	4,538,214	364,161	216	5.9	9.88	1.28	11.15	39	3.25
Jacksonville, Fla.....	339,325	355,875	695,200	1,293,750	129,594	85	6.6	2.85	2.55	5.40	76	1.83

Jersey City, N. J.	730,901	450,210	1,231,171	6,572,539	209,900	316,715	69	2.2	2.47	1.42	3.89	88
Kansas City, Kans.	407,448	40,500	447,948	8,140,850	139,600	121,857	70	5.7	3.34	3.68	3.89	89
Kansas City, Mo.	5,366,650	929,750	6,296,400	1,809,383	945,500	399,745	231	5.0	13.43	15.75	2.36	90
Knoxville, Tenn.	307,939	72,612	380,551	1,809,383	152,960	105,802	53	5.0	2.91	3.60	1.45	91
Long Beach, Calif.	2,226,400	268,215	2,494,615	6,075,120	1,589,275	142,032	600	42.2	15.68	1.89	17.56	92
Los Angeles, Calif.	4,253,739	23,096,177	28,352,914	30,712,901	10,393,623	1,238,048	3,626	29.3	15.22	3.44	18.66	93
Louisville, Ky.	375,110	375,110	2,724,155	4,921,065	701,500	307,745	104	3.4	7.63	1.22	8.85	94
Lowell, Mass.	216,895	107,400	324,295	377,584	100,150	100,234	24	2.4	2.16	1.07	3.24	95
Lynn, Mass.	655,035	219,356	874,391	2,322,852	267,000	102,320	56	5.5	6.40	2.14	8.55	96
Memphis, Tenn.	1,102,715	634,401	1,737,116	6,556,017	394,680	253,143	160	6.3	4.36	2.51	6.86	97
Miami, Fla.	633,255	464,974	1,098,229	1,137,828	290,205	110,637	88	8.0	11.0	5.72	9.93	98
Milwaukee, Wis.	5,236,485	1,873,731	7,110,216	13,092,107	2,535,050	578,249	535	9.3	9.06	3.24	12.30	99
Minneapolis, Minn.	6,167,730	819,625	6,987,355	6,366,855	2,475,935	464,356	629	13.5	13.28	1.77	15.05	100
Nashville, Tenn.	255,654	1,365,579	1,621,158	3,804,079	330,350	153,866	134	8.7	8.51	1.66	10.17	101
Newark, N. J.	1,309,925	1,271,693	2,581,618	6,656,497	1,084,700	442,337	234	5.3	2.87	7.22	7.22	102
New Bedford, Mass.	243,100	75,900	319,000	528,860	68,000	112,597	11	1.0	2.16	.67	2.83	103
New Haven, Conn.	2,287,365	306,221	2,593,586	3,696,097	435,700	162,655	81	5.0	14.06	1.88	15.94	104
New Orleans, La.	3,378,868	461,980	3,840,848	2,089,775	536,904	458,762	182	4.0	7.37	1.01	8.37	105
New York, N. Y.	205,678,550	28,574,480	234,253,030	202,975,234	99,402,837	6,930,446	23,402	33.8	29.68	4.12	33.80	106
Norfolk, Va.	595,504	225,625	822,129	1,201,072	491,868	129,170	129	9.9	4.60	1.74	6.34	107
Oakland, Calif.	4,703,042	442,428	5,145,470	5,518,463	1,789,584	284,063	507	17.8	16.56	1.56	18.11	108
Oklahoma City, Okla.	12,080,611	289,615	12,370,226	9,928,855	2,472,850	185,389	643	34.7	65.16	1.56	66.73	109
Omaha, Nebr.	1,897,986	431,628	2,329,614	3,586,844	87,718,050	214,006	175	8.2	10.89	2.02	10.89	110
Paterson, N. J.	543,750	336,184	879,934	1,159,457	165,975	138,513	38	2.7	3.93	2.43	6.35	111
Peoria, Ill.	520,042	273,435	793,477	1,992,015	464,950	104,969	156	14.9	4.96	2.60	7.56	112
Philadelphia, Pa.	13,031,865	2,033,575	15,065,440	34,599,340	2,630,425	1,950,961	562	2.9	6.68	1.04	7.72	113
Pittsburgh, Pa.	6,059,137	501,353	7,560,490	9,902,874	1,834,785	669,817	378	5.6	9.05	2.24	11.29	114
Portland, Ore.	2,780,985	1,719,425	3,500,410	5,391,185	1,720,600	301,815	363	12.0	9.21	2.38	11.60	115
Providence, R. I.	1,570,360	863,823	2,434,183	6,001,845	892,500	252,981	141	5.6	6.21	3.41	9.62	116
Reading, Pa.	1,993,532	261,277	2,254,809	1,475,544	181,800	111,171	19	1.7	17.63	2.35	20.28	117
Richmond, Va.	1,155,430	326,784	1,482,214	2,652,128	798,877	182,929	131	7.2	6.32	1.79	8.10	118
Rochester, N. Y.	2,705,948	501,074	3,207,022	2,932,173	474,500	328,132	81	2.5	13.05	1.53	9.77	119
St. Louis, Mo.	10,729,254	964,425	11,693,679	9,278,695	3,143,187	821,960	837	10.2	28.47	2.33	30.81	120
St. Paul, Minn.	7,733,747	633,101	8,366,848	7,081,730	1,045,800	271,606	201	7.4	17.39	1.22	18.60	121
Salt Lake City, Utah	2,438,788	170,464	2,609,252	1,856,760	862,990	140,267	267	19.0	5.27	.88	6.15	122
San Antonio, Tex.	1,220,925	203,239	1,424,164	4,984,730	574,960	231,542	375	16.2	21.04	3.17	24.20	123
San Diego, Calif.	3,113,078	468,893	3,581,971	2,868,613	1,335,652	147,995	374	25.3	18.38	1.91	20.29	124
San Francisco, Calif.	1,658,870	1,214,749	12,873,619	12,393,561	5,405,846	634,394	1,446	22.8	2.58	2.01	4.59	125
Scranton, Pa.	369,928	288,473	658,401	1,344,616	81,625	143,433	27	1.9	15.09	3.19	18.29	126
Seattle, Wash.	5,516,966	1,167,980	6,684,946	16,426,605	2,354,210	365,583	768	21.0	5.08	1.15	6.23	127
Somerville, Mass.	528,175	119,125	647,300	1,442,594	126,500	103,908	32	3.1	3.17	.73	3.90	128
South Bend, Ind.	330,140	75,711	405,851	(1)	130,000	104,193	36	3.5	9.47	2.50	11.96	129
Spokane, Wash.	1,063,395	288,609	1,352,004	1,334,148	487,450	115,514	127	11.0	9.47	2.50	11.96	130
Springfield, Mass.	1,251,242	266,995	1,518,237	2,106,543	353,970	149,900	73	4.9	8.35	1.78	10.13	131
Syracuse, N. Y.	3,594,756	1,198,318	4,793,074	2,577,410	716,100	209,326	137	6.5	17.17	5.72	22.90	132
Tacoma, Wash.	1,253,680	191,020	1,444,700	2,637,880	280,000	106,817	113	10.6	11.74	1.79	13.53	133
Tampa, Fla.	290,355	148,562	438,917	896,630	71,925	101,161	39	3.9	2.57	1.47	4.04	134
Toledo, Ohio	1,366,632	280,101	1,646,733	6,182,419	535,800	290,718	118	4.1	4.70	.96	5.66	135
Trenton, N. J.	646,252	226,858	873,110	1,754,538	147,400	123,356	21	1.7	5.24	1.84	7.08	136
Tulsa, Okla.	2,450,540	261,771	2,712,311	4,331,970	1,159,525	141,258	276	19.5	17.35	1.85	19.20	137
Utica, N. Y.	338,518	189,238	527,756	665,030	182,500	101,740	37	3.6	3.33	1.86	5.19	138

1 Data not reported.

TABLE 6.—TOTAL AND PER CAPITA EXPENDITURES FOR NEW BUILDINGS AND FOR REPAIRS, AND FAMILIES PROVIDED FOR, 93 CITIES, IN FIRST HALF OF 1931—Continued

City and State	Expenditure for new buildings	Expenditure for repairs and additions	Total expenditures, first half of—		Expenditure for new housekeeping dwellings only	Population census of 1930	Families provided for		Per capita expenditure				
			1931	1930			Number	Ratio for 10,000 population	For new buildings	For repairs and additions	Total	Rank of city	For house-keeping dwellings only
Washington, D. C.	\$20,981,678	\$3,440,306	\$24,421,984	\$30,522,416	\$13,891,655	486,869	2,205	45.3	\$43.10	\$7.07	\$50.16	2	\$28.53
Wichita, Kans.	1,076,579	137,252	1,213,831	3,602,304	637,380	111,110	207	18.6	9.69	1.24	10.92	40	5.74
Wilmington, Del.	1,333,631	511,050	1,844,681	3,436,122	661,350	106,597	131	12.3	12.51	4.79	17.31	21	6.20
Worcester, Mass.	851,945	320,897	1,172,842	3,183,465	740,900	195,311	121	6.2	4.36	1.64	6.00	74	3.79
Yonkers, N. Y.	5,400,125	300,555	5,700,680	3,168,315	3,227,740	134,646	396	29.4	40.11	2.23	42.34	3	23.97
Youngstown, Ohio.	630,859	401,559	1,032,418	1,809,399	223,850	170,002	48	2.8	3.71	2.36	6.07	73	1.38
Total.	532,669,164	89,201,881	621,871,045	749,013,782	224,539,783	36,325,736	53,745	14.8	14.67	2.45	17.12	-----	6.18

The per capita expenditure for all classes of buildings in these 93 cities during the first half of 1931 was \$17.12. Of this amount, \$14.67 was for new buildings and \$2.45 was for additions, alterations, and repairs. Of the amount spent for new buildings, \$6.18 was for house-keeping dwellings.

The five leading cities in per capita expenditure were Oklahoma City, \$66.73; Washington, D. C., \$50.16; Yonkers, \$42.34; New York City, \$33.80; and St. Paul, \$30.81.

In these 93 cities 53,745 families were provided with dwelling places in the new buildings for which permits were issued during the first half of 1931. This is at the rate of 14.8 families per 10,000 of population. The population of the 93 cities according to the 1930 census was 36,325,736. The following cities were the leading builders of homes during the first six months of 1930 and 1931 upon the basis of families provided for per 10,000 population:

First half 1930		First half 1931	
Long Beach.....	82. 5	Washington.....	45. 3
Oklahoma City.....	60. 5	Long Beach.....	42. 2
Los Angeles.....	47. 2	Houston.....	38. 8
Houston.....	42. 0	Oklahoma City.....	34. 7
Seattle.....	41. 9	New York.....	33. 8

The following list shows the five cities which have led in total expenditures for all classes of buildings during the first half of each year, 1922 to 1931, inclusive:

1922		1927	
New York City.....	\$339, 143, 976	New York City.....	\$490, 119, 588
Chicago.....	108, 699, 025	Chicago.....	210, 210, 475
Los Angeles.....	59, 459, 250	Detroit.....	78, 742, 327
Philadelphia.....	52, 429, 145	Philadelphia.....	61, 683, 600
Detroit.....	40, 650, 143	Los Angeles.....	58, 192, 977
1923		1928	
New York City.....	427, 633, 386	New York City.....	557, 561, 891
Chicago.....	189, 914, 112	Chicago.....	184, 650, 200
Los Angeles.....	93, 889, 185	Detroit.....	65, 175, 361
Philadelphia.....	75, 217, 095	Philadelphia.....	63, 195, 840
Detroit.....	61, 616, 302	Los Angeles.....	52, 002, 570
1924		1929	
New York City.....	548, 161, 458	New York City.....	694, 118, 064
Chicago.....	166, 436, 214	Chicago.....	118, 898, 940
Detroit.....	87, 195, 800	Philadelphia.....	58, 533, 385
Los Angeles.....	78, 828, 738	Detroit.....	55, 855, 545
Philadelphia.....	72, 573, 485	Los Angeles.....	54, 071, 599
1925		1930	
New York City.....	461, 513, 809	New York City.....	202, 975, 234
Chicago.....	204, 239, 810	Chicago.....	41, 953, 917
Detroit.....	89, 562, 885	Los Angeles.....	39, 712, 901
Philadelphia.....	85, 884, 680	Philadelphia.....	34, 569, 340
Los Angeles.....	83, 175, 457	Washington.....	30, 522, 416
1926		1931	
New York City.....	510, 263, 696	New York City.....	234, 253, 030
Chicago.....	183, 577, 891	Chicago.....	37, 651, 195
Detroit.....	96, 204, 092	Washington.....	24, 421, 984
Philadelphia.....	70, 379, 825	Los Angeles.....	23, 096, 177
Los Angeles.....	63, 161, 395	Boston.....	17, 583, 794

Table 7 shows the cost of new buildings for which contracts were let by the Federal Government and by the different State governments during the first half of 1931, by geographic divisions.

TABLE 7.—CONTRACTS LET FOR PUBLIC BUILDINGS BY DIFFERENT AGENCIES OF THE UNITED STATES GOVERNMENT AND BY THE DIFFERENT STATE GOVERNMENTS, DURING THE FIRST HALF OF 1931, BY GEOGRAPHIC DIVISIONS

Geographic division	Contracts let by Federal Government	Contracts let by State governments
New England.....	\$8, 166, 532	\$2, 771, 827
Middle Atlantic.....	10, 087, 594	18, 231, 338
East North Central.....	3, 985, 002	2, 754, 796
West North Central.....	4, 185, 516	1, 450, 510
South Atlantic.....	12, 174, 354	2, 370, 555
South Central.....	7, 850, 163	322, 357
Mountain and Pacific.....	8, 966, 954	2, 583, 555
Total.....	55, 416, 115	30, 484, 938

During the first six months of 1931 contracts were let by the different agencies of the United States Government for public buildings to cost \$55,416,115. Contracts let by State governments totaled \$30,484,938. These contracts were let in cities in all sections of the United States. Wherever a contract was let in a city having a population of 100,000 or over, the amount is included in the amount shown for such city in Table 6.

Use of Relief Funds for Apartment Construction, Leipzig

ACCORDING to a report from Paul J. Reveley, of the American consulate at Leipzig, dated May 29, 1931, the Leipzig Municipal Council has recently developed a plan which calls for the construction of 270 apartments from funds now at the disposal of the municipal poor relief bureau. These apartments will be constructed during 1931 and will give employment to 200 to 300 workmen who are now being supported from the local relief fund. This construction program is, of course, in addition to the regular program of apartment construction financed by the rent tax. The city will place at the disposal of the municipal poor relief bureau the sum of 4,000 marks (\$952) for each apartment; these loans will be entered as mortgages and provision will be made for interest and amortization in the same manner as the money given from the proceeds of the rent tax. The advantages of this plan are obvious. The city in this manner secures an investment and is relieved of the necessity of paying out the money, without any return, in the form of doles to such workmen. It is expected that the dwellings to be constructed in this manner will be larger than those built from the rent-tax fund, which are restricted to 45 square meters (484 square feet) of floor space. These 270 apartments will be rented by the city at comparatively moderate prices and will help to satisfy the large demand for dwellings suitable for families with children.

Extension of English Rural Workers' Housing Act

IN 1926, Parliament passed an act with the intention of encouraging the provision of housing accommodation for farm workers and others by subsidizing the improvement or reconstruction of existing buildings. (See Labor Review, March, 1927, p. 40). This act would normally have expired on September 30, 1931, but an amendment, which received the royal assent on July 8, has continued it in effect until September 30, 1936. The Ministry of Labor Gazette for July, 1931, gives this summary of its provisions:

The purpose of the housing (rural workers') act, 1926, was to promote the provision of housing accommodation for agricultural workers and persons of similar economic condition by means of the repair, reconstruction or improvement of existing houses and buildings. Local authorities were authorized to make grants and/or loans in aid of works of this kind; and an exchequer contribution is payable under the act toward the expenses incurred by a local authority in making grants. Not much advantage was at first taken of this act; but there are indications that it is now being used to an increasing extent.

Construction of Dwellings in the Netherlands, 1930

THE number of dwellings constructed in the Netherlands in 1930 was 52,588, according to a report from Charles L. Hoover, American consul general at Amsterdam, dated June 11, 1931. This constitutes a record, the average for the last 10 years having been 47,500, with a net increase of 42,500. The net increase in 1930, that is, the number of dwellings constructed above the number demolished, was 44,523. The increase in construction costs which took place in 1929 has disappeared, the costs during 1930 having dropped to the level of around 1925.

The percentage of private construction, which was less than one-half in 1921, has been above 80 per cent for several years, while in 1930 it was more than 85 per cent. This is in accordance with the policy of the Government of furthering the return of private construction to normal proportions and of inducing the building and loan associations and municipalities to take the initiative in places where the number of dwellings are insufficient. It is reported that the experience of recent years shows that it is no longer necessary for the Government to aid building through subsidies.

WAGES AND HOURS OF LABOR

Wages and Hours of Labor in the Motor-Vehicle Industry, 1930

WAGE earners in the motor-vehicle industry in the United States earned an average of 72.4 cents per hour in 1930, as against 75.0 cents in 1928, 72.3 cents in 1925, and 65.7 cents in 1922. Their average full-time hours per week were 48.8 in 1930, 49.4 in 1928, 50.3 in 1925, and 50.1 per week in 1922. Their average full-time earnings per week were \$35.33 in 1930, which was \$1.72 per week less than their average earnings in 1928, \$1.04 less than in 1925, and \$2.41 more than in 1922. These averages are for the establishments and employees in Table 1. They represent the industry and were computed from individual hours and earnings of wage earners, which were collected by agents of the Bureau of Labor Statistics of the Department of Labor, from the pay rolls and other records of the establishments. Index numbers of these averages, with the 1922 average the base or 100 per cent, are also given in the table.

TABLE 1.—AVERAGE HOURS AND EARNINGS, WITH INDEX NUMBERS, FOR ALL EMPLOYEES, 1922, 1925, 1928, AND 1930

Year	Number of establishments	Number of employees	Average full-time hours per week	Average earnings per hour	Average full-time earnings per week	Index numbers (1922=100) of—		
						Average full-time hours per week	Average earnings per hour	Average full-time earnings per week
1922	49	56,309	50.1	\$0.657	\$32.92	100.0	100.0	100.0
1925	99	144,362	50.3	.723	36.37	100.4	110.0	110.5
1928	94	153,962	49.4	.750	37.05	98.6	114.2	112.5
1930	96	134,902	48.8	.724	35.33	97.4	110.2	107.3

Hours and Earnings, 1928 and 1930, by Occupation and Sex

TABLE 2 shows average hours and earnings for the wage earners of each sex in each of the numerically important occupations in the industry in 1930 and 1928, and for the group designated as "other employees," which includes the occupations in which the number of wage earners was insufficient to warrant separate presentation.

The 1930 average full-time hours per week of males in the occupations in which wage earners of that sex were found ranged from 46.0 for die setters to 52.9 for hardeners; in 1928 the shortest full-time hours were those of sewing-machine operators (42.4 hours), while the longest were those of hardeners (54.5 hours). The hours of females ranged from 44.1 for axle assemblers to 54.0 for punch and press operators in 1930, while in 1928 the range was from 49.3 for machine-shop bench hands to 52.4 per week for lacquer rubbers. The average

hours of males were less in 43 and more in 10 occupations in 1930 than in 1928, while those of females were less in 8 and more in 8 occupations in 1930 than in 1928 and the same in 3 occupations.

In the case of males in the important occupations in the industry, apprentices had the lowest average earnings per hour in 1930 (57.1 cents) and hammermen in the forge shop the highest (\$1.005); in 1928 the range was from 57.2 cents for apprentices to \$1.128 for ding men. For females the average earnings per hour in 1930 ranged from 33.1 cents for mechanical stripers to 51.7 cents for hand letterers, stripers, and varnishers; in 1928 the range was from 39.0 cents for inspectors to 63.6 cents for lacquer rubbers. The average hourly earnings of males were less in 43 and more in 9 occupations in 1930 than in 1928 and the same in 1 occupation, while those of females were less in 17 and more in 2 occupations in 1930 than in 1928.

The average full-time weekly earnings of males in 1930 ranged from \$26.38 for apprentices to \$48.46 for ding men; these same occupations represented the extremes, in 1928 also earning \$27.80 and \$57.53, respectively. Among the females employed in this industry in 1930, axle assemblers had the lowest full-time weekly earnings (\$14.69) and hand letterers, stripers, and varnishers the highest (\$25.85); in 1928 the lowest and highest earnings were those, respectively, of inspectors (\$19.77) and lacquer rubbers (\$33.33). The averages for males were less in 47, and more in 6 occupations in 1930 than in 1928, while those for females were less in 18 occupations and more in 1 occupation.

TABLE 2.—AVERAGE HOURS AND EARNINGS, 1928 AND 1930, BY OCCUPATION AND SEX

Occupations	Sex	Number of establishments		Number of employees		Average full-time hours per week		Average earnings per hour		Average full-time earnings per week	
		1928	1930	1928	1930	1928	1930	1928	1930	1928	1930
Apprentices.....	M.	49	46	1,167	831	48.6	46.2	\$0.572	\$0.571	\$27.80	\$26.38
Assemblers, axle.....	M.	48	41	2,703	2,225	50.2	50.1	.755	.717	37.90	35.92
	F.	3	2	13	82	50.3	44.1	.451	.333	22.69	14.69
Assemblers, body frame.....	M.	47	48	3,256	2,661	50.4	50.0	.799	.707	40.27	35.35
	F.	5	12	12	49.8			.419		20.87	
Assemblers, chassis and final.....	M.	69	70	12,791	8,820	49.7	48.0	.768	.681	38.17	32.69
	F.	23	17	684	339	49.4	49.4	.510	.456	25.19	22.53
Assemblers, chassis frame.....	M.	45	40	1,125	665	49.5	48.7	.770	.708	38.12	34.48
Assemblers, motor.....	M.	59	54	4,859	4,655	50.1	48.8	.762	.725	38.18	35.38
	F.	9	5	81	66	50.4	50.0	.460	.478	23.18	23.90
Automatic operators, lathe and screw machine.....	M.	54	49	1,842	1,756	49.0	47.8	.806	.764	39.49	36.52
	F.	3	13	13	46.1			.413		19.04	
Balancers.....	M.	22	137	137	50.4			.767		38.66	
Bench hands, machine shop.....	M.	67	64	2,178	1,577	50.3	49.8	.724	.686	36.42	34.16
	F.	7	8	42	31	49.3	49.3	.538	.410	26.52	20.21
Boring-mill operators.....	M.	56	48	1,129	1,202	47.3	46.3	.808	.806	38.22	37.32
Bumpers.....	M.	43	40	358	398	49.6	49.0	1.042	.910	51.68	44.59
Crane operators.....	M.	37	41	217	212	49.3	49.2	.707	.673	34.86	33.11
Cutters, cloth and leather.....	M.	39	33	205	328	49.1	51.6	.831	.798	40.80	41.18
	F.	4	12	12	52.8			.461		24.34	
Die setters.....	M.	22	32	224	523	47.4	46.0	.849	.819	40.24	37.67
Ding men.....	M.	36	37	235	201	51.0	49.7	1.128	.975	57.53	48.46
Door hangers.....	M.	41	40	672	523	50.9	49.9	.861	.718	43.82	35.83
Drill-press operators.....	M.	78	78	8,488	6,566	49.6	48.6	.734	.696	36.41	33.83
	F.	15	11	164	117	50.5	49.5	.466	.407	23.53	20.15
Gear cutter operators.....	M.	50	50	1,121	1,144	49.5	48.3	.760	.740	37.62	35.74
Grinding machine operators.....	M.	70	66	5,419	5,144	48.8	47.6	.792	.780	38.65	37.13
	F.	4	3	8	6	50.3	50.0	.457	.428	22.99	21.40
Hammermen, forge shop.....	M.	79	76	850	1,148	48.9	47.7	.973	1.005	47.58	47.94
Other forge shop employees.....	M.	58	48	1,833	1,620	50.7	48.6	.735	.782	37.26	38.01

TABLE 2.—AVERAGE HOURS AND EARNINGS, 1928 AND 1930, BY OCCUPATION AND SEX—Continued

Occupations	Sex	Number of establishments		Number of employees		Average full-time hours per week		Average earnings per hour		Average full-time earnings per week	
		1928	1930	1928	1930	1928	1930	1928	1930	1928	1930
Hardeners	M.	56	55	720	1,116	54.5	52.9	\$0.749	\$0.720	\$40.82	\$38.00
Helpers	M.	74	69	4,085	1,894	48.1	48.4	.621	.633	29.87	30.64
	F.	4		17		52.0		.463		24.08	
Inspectors	M.	90	91	7,579	6,961	49.4	48.2	.723	.749	35.72	36.10
	F.	29	25	503	366	50.7	49.6	.390	.392	19.77	19.44
Laborers	M.	92	96	15,535	11,279	49.4	48.4	.589	.589	29.10	28.51
	F.	21	16	119	108	49.5	51.2	.465	.383	23.02	19.69
Lacquer rubbers	M.	43	46	1,465	1,820	50.3	48.7	.841	.663	42.30	32.21
	F.	3	4	36	48	52.4	50.1	.636	.340	33.33	17.03
Lathe operators	M.	69	67	5,553	4,335	49.0	47.9	.789	.756	38.66	36.21
	F.		3		23		50.8		.449		22.81
Letterers, strippers, and varnishers, hand	M.	59	54	650	512	50.0	49.8	1.115	.878	55.75	43.72
	F.	6	4	26	35	49.8	50.0	.588	.617	29.28	25.85
Strippers, mechanical	M.		10		25		49.3		.764		37.67
	F.		12		47		49.5		.331		16.38
Machinists	M.	81	81	3,465	3,432	47.9	46.9	.844	.851	40.43	39.91
Metal finishers	M.	55	54	4,606	5,404	50.5	50.4	.893	.738	45.10	37.20
Metal panelers	M.	34	38	1,947	1,646	49.8	49.6	.830	.721	41.33	35.76
Milling-machine operators	M.	70	66	3,231	2,781	49.5	48.7	.764	.722	37.82	35.16
	F.		5		22		50.5		.353		17.83
Millwrights	M.		80		833		48.9		.753		36.82
Molders, belt, drip, etc.	M.	30	25	672	362	50.6	49.7	.914	.704	46.25	34.99
Painters, general	M.	77	75	2,155	1,097	50.7	49.6	.770	.694	39.04	34.42
	F.	3	6	8	15	50.3	51.0	.415	.385	20.87	19.64
Paint sprayers	M.	71	72	1,581	1,712	50.4	49.1	.824	.734	41.53	36.04
	F.	5	4	19	14	48.9	49.9	.565	.457	27.63	22.80
Pattern makers	M.		36		477		50.9		.887		45.15
Planer and shaper operators	M.	38	31	401	257	49.1	46.4	.791	.822	38.84	38.14
Platers	M.	33	35	358	302	49.5	49.1	.756	.724	37.42	35.55
Polishers and buffers	M.	56	41	2,030	1,784	49.2	48.0	.936	.851	46.05	40.85
Punch and press operators	M.	61	54	4,268	4,352	47.9	48.0	.746	.717	35.73	34.42
	F.	6	6	100	244	51.3	54.0	.401	.401	25.19	21.65
Sand blasters, etc.	M.	44	53	1,026	692	48.7	50.0	.727	.629	35.40	31.45
	F.		3		3		48.3		.343		16.57
Sanders and rough stuff rubbers	M.	54	52	2,716	2,344	49.7	49.3	.807	.702	40.11	34.61
	F.	4	4	18	39	51.4	48.8	.540	.434	27.76	21.18
Sewing-machine operators	M.	13	18	228	117	42.4	47.1	.833	.664	35.32	31.27
	F.	43	33	861	1,167	51.0	51.2	.513	.461	26.16	23.60
Sheet-metal workers	M.	54	62	2,441	3,024	50.5	50.0	.807	.711	40.75	35.55
	F.	7	8	56	47	49.6	51.9	.489	.423	24.25	21.95
Straighteners	M.	45	38	531	629	49.8	48.7	.780	.763	38.84	37.16
Testers, final	M.	48	40	538	337	49.9	50.3	.699	.686	34.88	34.51
Testers, motor and transmission	M.	41	41	749	778	51.4	49.9	.728	.727	37.32	36.28
Tool and die makers	M.	77	79	3,523	5,175	48.8	49.9	.919	.887	44.85	44.26
Top builders	M.	56	58	4,090	4,158	49.6	50.0	.840	.751	41.66	37.55
	F.	11	8	287	327	49.5	50.7	.536	.416	26.53	21.09
Trim bench hands	M.	25	22	385	495	49.4	47.6	.770	.751	38.04	35.75
	F.	29	27	669	1,039	50.8	50.2	.483	.451	24.54	22.64
Varnish rubbers	M.	26	19	357	146	49.4	50.0	.836	.754	41.30	37.70
Welders and braziers, hand	M.	66	73	1,197	1,153	47.6	49.9	.852	.757	40.56	37.77
Welders, machine	M.	41	58	825	1,405	49.5	49.0	.789	.735	39.06	36.02
	F.		3		6		53.8		.421		22.65
Woodworking-machine operators	M.	47	45	1,815	1,264	50.5	50.0	.729	.691	36.81	34.55
Other skilled occupations	M.	93	92	5,615	3,045	48.9	48.7	.773	.793	37.80	38.62
	F.	4	4	8	5	51.0	51.0	.509	.487	25.96	24.84
Other employees	M.	93	96	12,932	10,932	48.8	48.0	.702	.743	34.26	35.66
	F.	30	29	391	282	49.2	51.4	.506	.447	24.90	22.98

Hours and Earnings, 1928 and 1930, by Sex and State

THE figures in Table 3 show average full-time hours per week, earnings per hour, and full-time earnings per week for each sex and for each of eight States.

In the various States covered by the study the average hourly earnings of males in 1930 ranged from 61.4 to 82.4 cents, while those of females ranged from 37.8 to 47.1 cents. In the same year full-time

weekly earnings of males ranged from \$30.95 to \$37.30, while those of females ranged from \$23.03 to \$25.25.

The average hours per week for males, all States combined, fell from 49.4 in 1928 to 48.7 in 1930; during the same period their average hourly rate declined from 75.6 cents to 73.3 cents while their average weekly earnings declined from \$37.35 in 1928 to \$35.70 in 1930. From 1928 to 1930 the weekly full-time hours of women, all States combined, rose slightly, from 50.3 to 50.6; average hourly earnings fell from 48.7 to 43.7 cents; and full-time weekly earnings declined from \$24.50 to \$22.11.

TABLE 3.—AVERAGE HOURS AND EARNINGS, 1928 AND 1930, BY SEX AND STATES

Sex and State	Number of establishments		Number of employees		Average full-time hours per week		Average earnings per hour		Average full-time weekly earnings	
	1928	1930	1928	1930	1928	1930	1928	1930	1928	1930
Males										
Illinois.....	8	6	3,361	2,824	49.2	46.6	\$0.704	\$0.740	\$34.64	\$34.48
Indiana.....	9	14	10,258	12,641	50.9	50.4	.652	.614	33.19	30.95
Michigan.....	33	30	92,784	79,397	48.8	48.0	.790	.777	38.55	37.30
New Jersey.....	6	4	5,629	2,538	45.3	44.3	.725	.824	32.84	36.50
New York.....	13	12	10,142	6,709	50.9	50.9	.734	.694	37.36	35.32
Ohio.....	12	17	14,624	13,851	49.6	48.5	.734	.701	36.41	34.00
Pennsylvania.....	6	5	8,127	4,874	52.8	53.2	.644	.624	34.00	33.20
Wisconsin.....	7	8	4,903	7,577	53.3	50.8	.717	.629	38.22	31.95
Total.....	94	96	149,828	130,411	49.4	48.7	.756	.733	37.35	35.70
Females										
Illinois.....	3	2	60	21	54.4	54.6	.441	.378	23.90	20.64
Indiana.....	6	8	342	501	50.4	50.4	.457	.412	23.03	20.76
Michigan.....	25	22	2,840	2,840	50.5	51.3	.487	.440	24.59	22.57
New Jersey.....	3	1	51	3	50.0	45.0	.505	.443	25.25	19.94
New York.....	8	7	226	228	49.8	51.0	.507	.451	25.25	23.00
Ohio.....	10	9	412	629	48.4	47.6	.516	.447	24.97	21.28
Pennsylvania.....	4	3	95	42	51.8	52.8	.460	.471	23.83	24.87
Wisconsin.....	5	5	108	227	49.2	49.1	.511	.414	25.14	20.33
Total.....	64	57	4,134	4,491	50.3	50.6	.487	.437	24.50	22.11
Males and females										
Illinois.....	8	6	3,421	2,845	49.3	46.7	.699	.737	34.46	34.42
Indiana.....	9	14	10,600	13,142	50.9	50.4	.647	.608	32.93	30.64
Michigan.....	33	30	95,624	82,237	48.9	48.1	.782	.765	38.24	36.80
New Jersey.....	6	4	5,680	2,541	45.3	44.3	.723	.824	32.75	36.50
New York.....	13	12	10,368	6,937	50.9	50.9	.729	.686	37.11	34.92
Ohio.....	12	17	15,036	14,480	49.6	48.4	.728	.693	36.11	33.54
Pennsylvania.....	6	5	8,222	4,916	52.8	53.1	.643	.623	33.95	33.08
Wisconsin.....	7	8	5,011	7,804	53.2	50.7	.714	.624	37.98	31.64
Total.....	94	96	153,962	134,902	49.4	48.8	.750	.724	37.05	35.33

Hours and Earnings, 1930, by Occupation, Sex, and State

TABLE 4 shows average hours and earnings, by sex, in 18 representative occupations in each State in 1930. It shows the variations in hours and earnings in different States and makes easy the comparison of the averages for males or for females in an occupation in one State with those in the same occupation in any other State.

Average full-time hours per week of axle assemblers (males) ranged in the different States from 48.3 to 53.3 and for all States averaged 50.1. Average earnings per hour for the males in this occupation ranged, by States, from 56.8 to 75.7 cents, and for all States averaged

71.7 cents. Average full-time earnings per week ranged, by States, from \$30.27 to \$37.85, and for all States averaged \$35.92.

TABLE 4.—AVERAGE HOURS AND EARNINGS IN 18 REPRESENTATIVE OCCUPATIONS, 1930, BY SEX AND STATE

Occupation, sex, and State	Number of establishments	Number of employees	Average full-time hours per week	Average earnings per hour	Average full-time earnings per week
Assemblers, axle, male:					
Illinois.....	2	15	49.8	\$0.631	\$31.42
Indiana.....	4	142	50.3	.610	30.68
Michigan.....	16	1,525	49.7	.750	37.28
New Jersey.....	2	18	48.3	.658	31.78
New York.....	6	92	50.4	.686	34.57
Ohio.....	6	330	51.6	.628	32.40
Pennsylvania.....	2	49	50.0	.757	37.85
Wisconsin.....	3	54	53.3	.568	30.27
Total.....	41	2,225	50.1	.717	35.92
Assemblers, axle, female: Michigan and Ohio	2	82	44.1	.333	14.09
Assemblers, body frame, male:					
Illinois.....	3	29	46.3	.773	35.79
Indiana.....	7	471	50.2	.591	29.67
Michigan.....	14	1,209	50.5	.745	37.62
New Jersey.....	2	90	41.0	.866	35.51
New York.....	7	203	50.1	.695	34.82
Ohio.....	7	387	49.3	.773	38.11
Pennsylvania.....	4	70	51.9	.644	33.42
Wisconsin.....	4	202	51.1	.619	31.63
Total.....	48	2,661	50.0	.707	35.35
Assemblers, chassis and final, male:					
Illinois.....	4	420	41.9	.828	34.60
Indiana.....	10	1,140	50.6	.584	29.55
Michigan.....	22	4,025	49.3	.716	35.30
New Jersey.....	3	261	40.6	.874	35.48
New York.....	9	808	50.5	.664	33.53
Ohio.....	13	1,055	47.5	.638	30.31
Pennsylvania.....	2	288	50.0	.608	30.40
Wisconsin.....	7	823	40.4	.619	25.01
Total.....	70	8,820	48.0	.681	32.69
Assemblers, chassis and final, female:					
Indiana.....	1	(1)	(1)	(1)	(1)
Michigan.....	11	185	49.4	.459	22.67
New York.....	1	(1)	(1)	(1)	(1)
Ohio.....	1	(1)	(1)	(1)	(1)
Wisconsin.....	3	32	49.2	.475	23.37
Total.....	17	339	49.4	.456	22.53
Assemblers, chassis frame, male:					
Illinois.....	2	17	49.8	.600	29.88
Indiana.....	5	43	51.4	.551	28.32
Michigan.....	14	293	48.3	.796	38.45
New Jersey.....	1	(1)	(1)	(1)	(1)
New York.....	5	25	50.2	.755	37.90
Ohio.....	7	192	47.5	.639	30.35
Pennsylvania.....	2	41	50.0	.756	37.80
Wisconsin.....	4	51	51.9	.630	32.70
Total.....	40	665	48.7	.708	34.48
Assemblers, motor, male:					
Illinois.....	4	137	53.3	.633	33.93
Indiana.....	7	318	50.2	.610	30.62
Michigan.....	18	3,179	47.8	.761	36.38
New Jersey.....	3	68	49.9	.818	40.82
New York.....	5	126	50.0	.687	34.35
Ohio.....	9	422	48.2	.663	31.96
Pennsylvania.....	3	133	54.7	.615	33.64
Wisconsin.....	5	372	53.3	.622	33.15
Total.....	54	4,655	48.8	.725	35.38

¹ Data included in total.

TABLE 4.—AVERAGE HOURS AND EARNINGS IN 18 REPRESENTATIVE OCCUPATIONS, 1930, BY SEX AND STATE—Continued

Occupation, sex, and State	Number of establishments	Number of employees	Average full-time hours per week	Average earnings per hour	Average full-time earnings per week
Assemblers, motor, female: Michigan	5	66	50.0	\$0.478	\$23.90
Automatic operators, lathe and screw machines, male:					
Illinois	2	11	54.1	.656	35.49
Indiana	6	129	50.0	.619	30.95
Michigan	18	1,017	48.1	.812	39.06
New Jersey	2	20	50.0	.859	42.95
New York	5	133	48.8	.762	37.19
Ohio	9	327	47.0	.698	32.81
Pennsylvania	3	29	50.4	.635	32.00
Wisconsin	4	90	40.3	.771	31.07
Total	49	1,756	47.8	.764	36.52
Automatic operators, lathe and screw machines, female: Michigan, Ohio, and Pennsylvania	3	13	46.1	.413	19.04
Drill-press operators, male:					
Illinois	4	135	53.4	.608	32.47
Indiana	13	682	50.1	.565	28.31
Michigan	26	4,365	47.6	.744	35.41
New Jersey	3	80	50.0	.754	37.70
New York	8	142	51.3	.622	31.91
Ohio	12	563	47.6	.653	31.08
Pennsylvania	5	292	52.0	.523	27.20
Wisconsin	7	307	53.4	.596	31.83
Total	78	6,566	48.6	.696	33.83
Drill-press operators, female:					
Indiana	3	36	50.0	.370	18.50
Michigan	5	41	52.1	.414	21.57
New York	1	(1)	(1)	(1)	(1)
Ohio	1	(1)	(1)	(1)	(1)
Pennsylvania	1	(1)	(1)	(1)	(1)
Total	11	117	49.5	.407	20.15
Grinding-machine operators, male:					
Illinois	4	75	53.9	.659	35.52
Indiana	9	460	50.0	.628	31.40
Michigan	23	3,696	46.6	.822	38.31
New Jersey	2	81	51.5	.789	40.63
New York	6	147	49.6	.758	37.60
Ohio	11	427	47.3	.712	33.68
Pennsylvania	5	78	52.4	.605	31.70
Wisconsin	6	180	53.5	.676	36.17
Total	66	5,144	47.6	.780	37.13
Grinding-machine operators, female: Indiana, New York, and Wisconsin	3	6	50.0	.428	21.40
Inspectors, male:					
Illinois	6	122	49.9	.724	36.13
Indiana	13	538	50.3	.632	31.79
Michigan	30	4,737	47.4	.781	37.02
New Jersey	3	129	45.5	.806	36.67
New York	10	319	51.0	.709	36.16
Ohio	16	680	48.3	.731	35.31
Pennsylvania	5	186	52.6	.636	33.45
Wisconsin	8	250	52.6	.635	33.40
Total	91	6,961	48.2	.749	36.10
Inspectors, female:					
Illinois	1	(1)	(1)	(1)	(1)
Indiana	4	52	50.0	.315	15.75
Michigan	12	252	50.0	.407	20.35
New Jersey	1	(1)	(1)	(1)	(1)
Ohio	3	33	45.0	.393	17.69
Pennsylvania	2	6	50.4	.395	19.91
Wisconsin	2	11	50.0	.508	25.40
Total	25	366	49.6	.392	19.44

¹ Data included in total.

TABLE 4.—AVERAGE HOURS AND EARNINGS IN 18 REPRESENTATIVE OCCUPATIONS, 1930, BY SEX AND STATE—Continued

Occupation, sex, and State	Number of establishments	Number of employees	Average full-time hours per week	Average earnings per hour	Average full-time earnings per week
Laborers, male:					
Illinois.....	6	306	45.4	\$0.704	\$31.96
Indiana.....	14	1,003	50.5	.508	25.65
Michigan.....	30	7,073	47.8	.619	29.59
New Jersey.....	4	237	42.8	.763	32.66
New York.....	12	596	50.9	.556	28.30
Ohio.....	17	1,301	48.4	.522	25.26
Pennsylvania.....	5	259	52.7	.477	25.14
Wisconsin.....	8	504	52.1	.531	27.67
Total.....	96	11,279	48.4	.589	28.51
Laborers, female:					
Indiana.....	1	(1)	(1)	(1)	(1)
Michigan.....	9	52	52.7	.319	16.81
New Jersey.....	2	7	51.7	.426	22.02
Ohio.....	3	8	49.3	.353	17.40
Wisconsin.....	1	(1)	(1)	(1)	(1)
Total.....	16	108	51.2	.383	19.61
Lathe operators, male:					
Illinois.....	4	107	53.4	.657	35.08
Indiana.....	12	488	50.1	.604	30.26
Michigan.....	21	2,681	46.3	.820	37.97
New Jersey.....	3	122	50.0	.809	40.45
New York.....	7	113	49.7	.708	35.19
Ohio.....	11	416	47.7	.757	36.11
Pennsylvania.....	4	161	51.1	.604	30.86
Wisconsin.....	5	247	54.2	.580	31.44
Total.....	67	4,335	47.9	.756	36.21
Lathe operators, female: Illinois and Michigan.....	3	23	50.8	.449	22.81
Letterers, strippers, and varnishers, hand, male:					
Indiana.....	9	68	50.6	.701	35.47
Michigan.....	20	286	49.8	.940	46.81
New Jersey.....	2	21	42.9	.816	35.01
New York.....	9	32	51.1	.954	48.75
Ohio.....	8	34	48.9	.815	39.85
Pennsylvania.....	2	5	50.0	.874	43.70
Wisconsin.....	4	66	51.4	.670	34.44
Total.....	54	512	49.8	.878	43.72
Letterers, strippers, and varnishers, hand, female: Indiana and Michigan.....	4	35	50.0	.517	25.85
Machinists, male:					
Illinois.....	2	35	54.8	.659	36.11
Indiana.....	13	255	50.1	.666	33.37
Michigan.....	30	2,436	45.4	.912	41.40
New Jersey.....	3	83	47.5	.942	44.75
New York.....	10	101	50.5	.748	37.77
Ohio.....	12	270	48.3	.796	38.45
Pennsylvania.....	5	131	53.0	.706	37.42
Wisconsin.....	6	121	53.5	.646	34.56
Total.....	81	3,432	46.9	.851	39.91
Milling-machine operators, male:					
Illinois.....	4	62	53.7	.630	33.83
Indiana.....	10	266	50.0	.588	29.40
Michigan.....	22	1,779	47.8	.766	36.61
New Jersey.....	3	58	50.0	.780	39.00
New York.....	5	69	50.2	.685	34.39
Ohio.....	13	280	48.1	.724	34.82
Pennsylvania.....	4	125	51.0	.575	29.33
Wisconsin.....	5	142	53.7	.573	30.77
Total.....	66	2,781	48.7	.722	35.16
Milling-machine operators, female:					
Illinois.....	1	(1)	(1)	(1)	(1)
Indiana.....	1	(1)	(1)	(1)	(1)
Michigan.....	3	14	49.7	.352	17.49
Total.....	5	22	50.5	.353	17.83

¹ Data included in total.

TABLE 4.—AVERAGE HOURS AND EARNINGS IN 18 REPRESENTATIVE OCCUPATIONS, 1930, BY SEX AND STATE—Continued

Occupation, sex, and State	Number of establishments	Number of employees	Average full-time hours per week	Average earnings per hour	Average full-time earnings per week
Sewing-machine operators, male:					
Illinois.....	2	15	40.6	\$0.900	\$36.54
Indiana.....	1	(1)	(1)	(1)	(1)
Michigan.....	7	49	51.7	.504	26.06
New Jersey.....	1	(1)	(1)	(1)	(1)
New York.....	5	15	50.6	.730	36.94
Ohio.....	1	(1)	(1)	(1)	(1)
Wisconsin.....	1	(1)	(1)	(1)	(1)
Total.....	18	117	47.1	.664	31.27
Sewing-machine operators, female:					
Indiana.....	5	144	50.8	.428	21.74
Michigan.....	15	742	51.9	.461	23.93
New York.....	3	39	52.1	.532	27.72
Ohio.....	6	142	49.0	.497	24.35
Pennsylvania.....	1	(1)	(1)	(1)	(1)
Wisconsin.....	3	97	49.5	.395	19.55
Total.....	33	1,167	51.2	.461	23.60
Tool and die workers, male:					
Illinois.....	4	37	52.8	.763	40.29
Indiana.....	14	444	50.3	.763	38.38
Michigan.....	29	3,160	48.4	.931	45.06
New Jersey.....	3	45	50.0	.864	43.20
New York.....	8	230	51.3	.796	40.83
Ohio.....	10	677	51.5	.927	47.74
Pennsylvania.....	5	477	55.0	.758	41.69
Wisconsin.....	6	105	52.1	.788	41.05
Total.....	79	5,175	49.9	.887	44.26
Top builders, male:					
Illinois.....	2	159	40.2	.918	36.90
Indiana.....	9	426	50.5	.685	34.59
Michigan.....	21	1,973	50.7	.775	39.29
New Jersey.....	2	112	40.4	.889	35.92
New York.....	9	479	51.5	.793	40.84
Ohio.....	8	267	48.6	.701	34.07
Pennsylvania.....	2	11	50.0	.843	42.15
Wisconsin.....	5	731	51.2	.633	32.41
Total.....	58	4,158	50.0	.751	37.55
Top builders, female:					
Indiana.....	1	(1)	(1)	(1)	(1)
Michigan.....	4	241	50.9	.420	21.38
New York.....	2	76	50.4	.402	20.26
Wisconsin.....	1	(1)	(1)	(1)	(1)
Total.....	8	327	50.7	.416	21.09
Trim bench hands, male:					
Illinois.....	1	(1)	(1)	(1)	(1)
Indiana.....	4	56	50.3	.641	32.24
Michigan.....	7	177	50.8	.774	39.32
New Jersey.....	1	(1)	(1)	(1)	(1)
New York.....	4	8	50.3	.673	33.85
Ohio.....	4	147	48.1	.689	33.14
Wisconsin.....	1	(1)	(1)	(1)	(1)
Total.....	22	495	47.6	.751	35.75
Trim bench hands, female:					
Indiana.....	3	48	50.4	.455	22.93
Michigan.....	12	639	50.8	.446	22.66
New York.....	4	43	52.3	.495	25.80
Ohio.....	4	245	48.5	.476	23.09
Wisconsin.....	4	64	48.5	.385	18.67
Total.....	27	1,039	50.2	.451	22.64

1 Data included in total.

Union Scales of Wages and Hours of Labor in 1931

Part 1. Preliminary Report for Selected Cities

THE Bureau of Labor Statistics has collected, as of May 15, 1931, information concerning the union scales of wages and hours of labor in the principal time-work trades in 67 of the leading cities of the United States. A full compilation of the figures is now in progress and will be published as a bulletin of the bureau.

In this article an abridged compilation is made of the 1931 data for 20 important trade groups in 40 localities, with comparative figures for all but six of the preceding years back to 1913, in so far as effective scales were found for the earlier years. Data for 1914, 1915, 1916, 1917, 1918, and 1921 are omitted for lack of space, but figures for those years may be obtained by referring to the September, 1925, issue of the Labor Review.

The trades here covered are:

Bricklayers.
Building laborers.
Carpenters.
Cement finishers.
Compositors: Book and job.
Compositors, day work: Newspaper.
Electrotypers: Finishers.
Electrotypers: Molders.
Granite cutters, inside.
Hod carriers.
Inside wiremen.

Painters.
Plasterers.
Plasterers' laborers.
Plumbers.
Sheet-metal workers.
Stonecutters.
Structural-iron workers.
Typesetting-machine operators: Book and job.
Typesetting-machine operators, day work: Newspaper.

The union scale represents the minimum rate and the maximum hours agreed upon between the unions and the employers. Often, however, a higher rate was paid to some or perhaps all of the members of a union in some particular city.

The union scale generally represents the prevailing rate for the trade in the locality, even though all persons in the trade may not be members of the union.

Two or more quotations of rates and hours are shown for some occupations in some cities. Such quotations indicate that there were two or more agreements with different employers and possibly made also by different unions, or for subclassifications of a specific occupation, such as building laborers.

The report affords 679 comparisons of wage rates per hour as between 1930 and 1931. There are 99 cases of increase, 39 cases of decrease, and 541 cases of no change in rates. There are 672 comparisons of full-time hours per week. Of this number 7 are increases, 97 are decreases, and 568 instances of no change.

UNION SCALES OF WAGES AND HOURS OF LABOR IN SPECIFIED OCCUPATIONS, 1913 TO 1931, BY CITIES

Bricklayers

City	Rates per hour (cents)													Hours per week													
	1913	1919	1920	1922	1923	1924	1925	1926	1927	1928	1929	1930	1931	1913	1919	1920	1922	1923	1924	1925	1926	1927	1928	1929	1930	1931	
Atlanta.....	45.0	70.0	112.5	100.0	112.5	112.5 125.0	112.5 125.0	140.0	140.0	140.0	125.0	125.0	125.0	53	44	44	44	44	44	44	44	44	44	44	44	44	44
Baltimore.....	62.5	100.0	125.0	125.0	130.0	150.0	162.5	162.5	162.5	162.5	162.5	175.0	175.0	145	44	44	44	44	44	44	44	44	44	44	44	44	
Birmingham...	70.0	87.5	100.0	100.0	112.5	125.0	137.5	150.0	150.0	150.0	150.0	150.0	150.0	34	44	44	44	44	44	44	44	44	44	44	44	44	
Boston.....	65.0	80.0	100.0	100.0	125.0	125.0	125.0	140.0	140.0	140.0	150.0	150.0	150.0	44	44	44	44	44	44	44	44	44	44	44	44	44	
Buffalo.....	65.0	85.0	100.0	100.0	125.0	125.0	137.5	137.5	150.0	150.0	150.0	150.0	150.0	48	44	44	44	44	44	44	44	44	44	44	44	44	
Charleston, S. C.....	40.0	75.0	100.0	85.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	53	48	48	48	48	48	48	48	48	44	44	44	44	
Chicago.....	75.0	87.5	125.0	110.0	110.0	125.0	150.0	150.0	162.5	162.5	162.5	170.0	170.0	44	44	44	44	44	44	44	44	44	44	44	44	44	
Cincinnati.....	65.0	90.0	125.0	125.0	125.0	150.0	162.5	162.5	162.5	162.5	162.5	162.5	162.5	45	45	45	45	45	45	45	44	44	44	44	44	44	
Cleveland.....	65.0	90.0	125.0	125.0	140.0	150.0	150.0	150.0	150.0	162.5	162.5	162.5	162.5	48	44	44	44	44	44	44	44	44	44	44	44	44	
Dallas.....	87.5	100.0	112.5	137.5	150.0	150.0	150.0	162.5	162.5	162.5	162.5	175.0	175.0	44	44	44	44	44	44	44	44	44	44	44	44	44	
Denver.....	75.0	100.0	125.0	125.0	137.5	150.0	150.0	150.0	150.0	150.0	150.0	150.0	150.0	44	44	44	44	44	44	44	44	44	44	44	44	44	
Detroit.....	65.0	90.0	125.0	100.0	135.0	150.0	150.0	150.0	157.5	157.5	157.5	157.5	157.5	48	44	44	44	44	44	44	44	44	44	44	44	44	
Fall River.....	55.0	85.0	115.0	95.0	110.0	110.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	48	44	44	44	44	44	44	44	44	44	44	44	44	
Indianapolis...	75.0	85.0	125.0	115.0	135.0	150.0	150.0	150.0	162.5	162.5	162.5	162.5	162.5	44	44	44	44	44	44	44	44	44	44	44	44	44	
Jacksonville...	62.5	75.0	87.5	87.5	87.5	100.0	125.0	150.0	150.0	150.0	125.0	125.0	125.0	48	44	44	44	44	44	44	44	44	44	44	44	44	
Kansas City, Mo.....	75.0	100.0	112.5	112.5	137.5	150.0	150.0	150.0	150.0	150.0	150.0	150.0	150.0	44	44	44	44	44	44	44	44	44	44	44	44	44	
Little Rock...	75.0	100.0	125.0	125.0	125.0	137.5	150.0	150.0	150.0	150.0	150.0	150.0	150.0	44	44	44	44	44	44	44	44	44	44	44	44	44	
Los Angeles...	75.0	87.5	125.0	125.0	125.0	125.0	137.5	137.5	137.5	137.5	137.5	137.5	137.5	44	44	44	44	44	44	44	44	44	44	44	44	44	
Louisville.....	65.0	85.0	115.0	125.0	125.0	150.0	150.0	150.0	150.0	150.0	150.0	150.0	150.0	48	44	44	44	44	44	44	44	44	44	44	44	44	
Manchester...	55.0	90.0	112.5	112.5	112.5	150.0	137.5	137.5	137.5	137.5	137.5	150.0	150.0	48	44	44	44	44	44	44	44	44	44	44	44	44	
Memphis.....	75.0	87.5	125.0	112.5	125.0	150.0	150.0	162.5	162.5	162.5	162.5	162.5	162.5	44	44	44	44	44	44	44	44	44	44	44	44	44	
Milwaukee.....	67.5	90.0	125.0	100.0	125.0	125.0	125.0	125.0	140.0	140.0	140.0	140.0	140.0	44	44	44	44	44	44	44	44	44	44	44	44	44	
Minneapolis...	65.0	87.5	125.0	100.0	125.0	125.0	125.0	125.0	125.0	137.5	137.5	137.5	137.5	48	44	44	44	44	44	44	44	44	44	44	44	44	
Newark, N. J...	65.0	87.5	125.0	125.0	125.0	150.0	162.5	162.5	175.0	175.0	175.0	183.8	183.8	44	44	44	44	44	44	44	44	44	44	44	44	44	
New Haven.....	60.0	82.5	100.0	100.0	112.5	125.0	125.0	137.5	137.5	143.8	150.0	150.0	150.0	44	44	44	44	44	44	44	44	44	44	44	44	44	
New Orleans...	62.5	75.0	100.0	100.0	100.0	125.0	125.0	125.0	125.0	150.0	150.0	150.0	150.0	44	44	44	44	44	44	44	44	44	44	44	44	44	
New York.....	70.0	87.5	125.0	125.0	150.0	150.0	150.0	175.0	175.0	175.0	187.5	192.5	192.5	44	44	44	44	44	44	44	44	44	44	44	44	44	
Omaha.....	70.0	87.5	125.0	100.0	125.0	125.0	125.0	137.5	137.5	137.5	125.0	125.0	125.0	44	44	44	44	44	44	44	44	44	44	44	44	44	
Philadelphia...	62.5	80.0	130.0	125.0	137.5	150.0	150.0	162.5	162.5	162.5	162.5	175.0	175.0	44	44	44	44	44	44	44	44	44	44	44	44	44	
Pittsburgh...	70.0	90.0	112.5	130.0	130.0	140.0	155.0	162.5	162.5	170.0	170.0	175.0	175.0	44	44	44	44	44	44	44	44	44	44	44	44	44	

7 48 hours per week, October to April, inclusive.

4 48 hours per week, Nov. 16 to Mar. 15.

1 44½ hours per week, November to March, inclusive.

2 44 hours per week, June to August, inclusive.

3 40 hours per week, October to April, inclusive.

4 48 hours per week, December to February, inclusive.

5 48 hours per week, October to December, inclusive.

UNION SCALES OF WAGES AND HOURS OF LABOR IN SPECIFIED OCCUPATIONS, 1913 TO 1931, BY CITIES—Continued
Bricklayers—Continued

City	Rates per hour (cents)													Hours per week												
	1913	1919	1920	1922	1923	1924	1925	1926	1927	1928	1929	1930	1931	1913	1919	1920	1922	1923	1924	1925	1926	1927	1928	1929	1930	1931
Portland, Oreg.	75.0	100.0	125.0	112.5	125.0	125.0	137.5	137.5	137.5	150.0	150.0	150.0	150.0	44	44	44	44	44	44	44	44	44	40	40	40	40
Providence	65.0	80.0	115.0	115.0	115.0	125.0	125.0	150.0	150.0	150.0	150.0	150.0	150.0	44	44	44	44	44	44	44	44	44	44	44	44	44
Richmond, Va.	65.0	87.5	100.0	100.0	150.0	125.0	150.0	150.0	125.0	150.0	150.0	150.0	150.0	45	45	45	45	45	45	45	45	44	44	44	44	44
St. Louis	70.0	100.0	125.0	125.0	150.0	175.0	175.0	175.0	175.0	175.0	175.0	175.0	175.0	44	44	44	44	44	44	44	44	44	44	44	44	44
St. Paul	65.0	87.5	125.0	100.0	100.0	112.5	112.5	125.0	125.0	125.0	125.0	125.0	125.0	48	44	44	44	44	44	44	44	44	44	44	44	44
Salt Lake City	75.0	100.0	125.0	112.5	125.0	137.5	137.5	137.5	137.5	137.5	137.5	137.5	137.5	44	44	44	44	44	44	44	44	44	44	44	44	44
San Francisco	87.5	112.5	125.0	125.0	137.5	137.5	137.5	137.5	137.5	137.5	137.5	137.5	137.5	44	44	44	44	44	44	44	44	44	44	44	44	44
Scranton	60.0	75.0	112.5	125.0	137.5	150.0	150.0	150.0	150.0	150.0	150.0	150.0	150.0	10	44	44	44	44	44	44	44	44	44	44	44	44
Seattle	75.0	112.5	125.0	112.5	125.0	137.5	137.5	137.5	145.0	150.0	150.0	150.0	150.0	44	40	40	44	44	44	44	44	44	44	44	44	44
Washington	62.5	87.5	100.0	137.5	137.5	150.0	162.5	162.5	162.5	162.5	162.5	162.5	175.0	12	45	44	44	44	44	44	44	44	44	44	44	44

Building laborers

Boston	35.0	40.0	{ 67.5 70.0 }	67.5 70.0	72.5	74.0	74.0	74.0	74.0	80.0	80.0	80.0	80.0	48	44	44	44	48	48	48	48	48	48	48	48	48	48
Chicago	40.0	57.5	100.0	72.5	72.5	72.5	87.5	87.5	90.0	90.0	97.5	97.5	112.5	44	44	44	44	44	44	44	44	44	44	44	44	44	
Cincinnati	20.0	40.0	45.0	40.0	45.0	52.5	55.0	58.0	60.0	60.0	60.0	60.0	60.0	60	50	50	50	50	50	50	50	50	50	50	50	45	
Cleveland	57.5	57.5	87.5	57.5	87.5	87.5	87.5	87.5	87.5	87.5	87.5	87.5	87.5	44	44	44	44	44	44	44	44	44	44	44	44	44	
Denver	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	44	44	44	44	44	44	44	44	44	44	44	44	44	
Detroit	65.0	75.0	75.0	50.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	44	44	44	44	40 1/2	40 1/2	44	44	44	44	44	44	44	
Kansas City, Mo.	27.5	57.5	75.0	70.0	70.0	75.0	75.0	75.0	75.0	75.0	75.0	75.0	75.0	48	48	44	44	44	44	44	44	44	44	44	44	40	
Louisville	27.9	35.0	50.0	40.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	48	50	44	44	44	44	44	44	44	44	44	44	44	
Milwaukee			65.0	55.0	60.0	75.0	75.0	75.0	75.0	75.0	75.0	75.0	75.0			44	44	44	44	44	44	44	44	44	44	44	
Minneapolis				55.0	55.0	55.0	55.0	55.0	55.0	55.0	55.0	55.0	55.0				44	44	44	44	44	44	44	44	44	44	
Newark, N. J.						100.0	112.5	112.5	112.5	112.5	112.5	112.5	125.0							44	44	44	44	44	44	40	
New Haven								75.0	75.0	75.0	75.0	75.0	75.0								44	44	44	44	44	44	

Building laborers

Boston	35.0	40.0	57.5	67.5	67.5	65.0	74.0	74.0	74.0	74.0	74.0	74.0	74.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0
Chicago	40.0	57.5	100.0	72.5	72.5	82.5	87.5	87.5	87.5	87.5	87.5	87.5	87.5	97.5	97.5	97.5	97.5	97.5	97.5	97.5	97.5	97.5	97.5	97.5	97.5	97.5
Cincinnati	20.0	40.0	45.0	40.0	45.0	55.0	58.0	58.0	58.0	58.0	58.0	58.0	58.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0
Cleveland	50.0	57.5	87.5	57.5	87.5	87.5	87.5	87.5	87.5	87.5	87.5	87.5	87.5	87.5	87.5	87.5	87.5	87.5	87.5	87.5	87.5	87.5	87.5	87.5	87.5	87.5
Denver	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0
Detroit	65.0	75.0	75.0	50.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0
Kansas City, Mo.	27.5	57.5	75.0	70.0	70.0	75.0	75.0	75.0	75.0	75.0	75.0	75.0	75.0	82.5	82.5	82.5	82.5	82.5	82.5	82.5	82.5	82.5	82.5	82.5	82.5	82.5
Louisville	27.9	35.0	50.0	40.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0
Milwaukee	65.0	65.0	65.0	55.0	60.0	75.0	75.0	75.0	75.0	75.0	75.0	75.0	75.0	75.0	75.0	75.0	75.0	75.0	75.0	75.0	75.0	75.0	75.0	75.0	75.0	75.0
Minneapolis	55.0	55.0	55.0	55.0	55.0	55.0	55.0	55.0	55.0	55.0	55.0	55.0	55.0	55.0	55.0	55.0	55.0	55.0	55.0	55.0	55.0	55.0	55.0	55.0	55.0	55.0
Newark, N. J.	55.0	55.0	55.0	55.0	55.0	55.0	55.0	55.0	55.0	55.0	55.0	55.0	55.0	55.0	55.0	55.0	55.0	55.0	55.0	55.0	55.0	55.0	55.0	55.0	55.0	55.0
New Haven	55.0	55.0	55.0	55.0	55.0	55.0	55.0	55.0	55.0	55.0	55.0	55.0	55.0	55.0	55.0	55.0	55.0	55.0	55.0	55.0	55.0	55.0	55.0	55.0	55.0	55.0

New York	22.5	40.5	75.0	81.3	81.3	105.0	105.0	103.8	103.1	103.1	48	48	48	44	44	44	44	40
Philadelphia	25.0	45.0	70.0	70.0	70.0	80.0	80.0	80.0	80.0	80.0	54	44	44	44	44	44	44	40
Pittsburgh	37.5	62.5	75.0	67.5	67.5	67.5	67.5	68.8	75.0	75.0	48	44	44	44	44	44	44	40
Portland, Oreg.	25.0	40.3	54.0	54.0	54.0	75.0	75.0	87.5	87.5	87.5	44	44	44	44	44	44	44	44
St. Louis	25.0	45.0	67.5	57.5	57.5	67.5	67.5	87.5	87.5	87.5	44	44	44	44	44	44	44	44
St. Paul	27.8	62.5	75.0	62.5	62.5	62.5	62.5	68.8	75.0	75.0	44	44	44	44	44	44	44	44
San Francisco	25.0	50.0	58.5	60.0	60.0	60.0	60.0	70.0	70.0	70.0	44	44	44	44	44	44	44	40
Scranton	37.5	68.8	75.0	62.5	62.5	62.5	62.5	82.5	82.5	82.5	44	44	44	44	44	44	44	40
Seattle	37.5	68.8	75.0	62.5	62.5	62.5	62.5	82.5	82.5	82.5	44	44	44	44	44	44	44	40

Carpenters

Atlanta	40.0	60.0	80.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0	44	44	44	44	44	44	44	44
Baltimore	43.8	80.0	90.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	44	44	44	44	44	44	44	44
Birmingham	52.5	65.0	75.0	75.0	75.0	75.0	75.0	75.0	75.0	75.0	44	44	44	44	44	44	44	44
Boston	50.0	75.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	44	44	44	44	44	44	44	44
Buffalo	50.0	70.0	100.0	87.5	87.5	87.5	87.5	87.5	87.5	87.5	44	44	44	44	44	44	44	44
Charleston, S. C.	33.3	70.0	80.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0	44	44	44	44	44	44	44	44
Chicago	65.0	80.0	125.0	110.0	110.0	110.0	110.0	110.0	110.0	110.0	44	44	44	44	44	44	44	44
Cincinnati	50.0	70.0	100.0	95.0	95.0	95.0	95.0	95.0	95.0	95.0	44	44	44	44	44	44	44	44
Cleveland	50.0	85.0	125.0	104.0	104.0	104.0	104.0	104.0	104.0	104.0	44	44	44	44	44	44	44	44
Dallas	55.0	87.5	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	44	44	44	44	44	44	44	44
Denver	60.0	87.5	112.5	100.0	100.0	100.0	100.0	100.0	100.0	100.0	44	44	44	44	44	44	44	44
Detroit	50.0	80.0	100.0	85.0	85.0	85.0	85.0	85.0	85.0	85.0	44	44	44	44	44	44	44	44
Fall River	42.0	75.0	100.0	95.0	95.0	95.0	95.0	95.0	95.0	95.0	44	44	44	44	44	44	44	44
Indianapolis	50.0	75.0	100.0	92.5	92.5	92.5	92.5	92.5	92.5	92.5	44	44	44	44	44	44	44	44
Jacksonville	31.3	65.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	44	44	44	44	44	44	44	44
Kansas City, Mo.	55.0	85.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	44	44	44	44	44	44	44	44
Little Rock	50.0	80.0	92.5	80.0	80.0	80.0	80.0	80.0	80.0	80.0	44	44	44	44	44	44	44	44

¹² 44½ hours per week, October to April, inclusive.
¹³ Old scale; strike pending.

¹⁰ 48 hours per week, September to April, inclusive.
¹¹ 44 hours per week, September to April, inclusive.

¹⁴ 40 hours per week, June to August, inclusive.
¹⁵ 44 hours per week, December to February, inclusive.
¹⁶ 40 hours per week, June to September, inclusive.

UNION SCALES OF WAGES AND HOURS OF LABOR IN SPECIFIED OCCUPATIONS, 1913 TO 1931, BY CITIES—Continued

Carpenters—Continued

City	Rates per hour (cents)												Hours per week														
	1913	1919	1920	1922	1923	1924	1925	1926	1927	1928	1929	1930	1931	1913	1919	1920	1922	1923	1924	1925	1926	1927	1928	1929	1930	1931	
Los Angeles	50.0	75.0	87.5	100.0	112.5	112.5	100.0	100.0	100.0	100.0	100.0	100.0	100.0	48	44	44	44	44	44	44	44	44	44	44	44	44	44
Louisville	45.0	60.0	80.0	80.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	112.5	100.0	44	44	44	44	44	44	44	44	44	44	44	44	44	44
Manchester	40.0	60.0	100.0	90.0	90.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	48	44	44	44	44	44	44	44	44	44	44	44	44	44
Memphis	50.0	75.0	100.0	75.0	75.0	87.5	100.0	100.0	100.0	100.0	100.0	100.0	100.0	44	44	44	44	44	44	44	44	44	44	44	44	44	44
Milwaukee	50.0	70.0	100.0	85.0	95.0	100.0	100.0	100.0	100.0	100.0	100.0	110.0	110.0	44	44	44	44	44	44	44	44	44	44	44	44	44	44
Minneapolis	50.0	75.0	100.0	80.0	80.0	90.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	44	44	44	44	44	44	44	44	44	44	44	44	44	44
Newark, N. J.	50.0	80.0	100.0	112.5	112.5	131.3	137.5	140.0	140.0	150.0	150.0	150.0	165.0	44	44	44	44	44	44	44	44	44	44	44	44	44	44
New Haven	47.5	65.0	100.0	90.0	90.0	100.0	100.0	100.0	112.5	112.5	125.0	125.0	125.0	44	44	44	44	44	44	44	44	44	44	44	44	44	44
New Orleans	40.0	60.0	75.0	100.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	48	48	48	44	44	44	44	44	44	44	44	44	44	44
New York	62.5	75.0	112.5	112.5	112.5	131.3	131.3	150.0	150.0	150.0	150.0	165.0	165.0	44	44	44	44	44	44	44	44	44	44	44	44	44	44
Omaha	50.0	75.0	112.5	90.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	44	44	44	44	44	44	44	44	44	44	44	44	44	44
Philadelphia	50.0	80.0	112.5	90.0	112.5	112.5	112.5	125.0	125.0	125.0	125.0	125.0	125.0	44	44	44	44	44	44	44	44	44	44	44	44	44	44
Pittsburgh	55.0	80.0	90.0	100.0	120.0	137.5	137.5	150.0	150.0	150.0	150.0	150.0	150.0	44	44	44	44	44	44	44	44	44	44	44	44	44	44
Portland, Oreg.	50.0	86.0	100.0	90.0	100.0	100.0	100.0	100.0	112.5	112.5	112.5	112.5	112.5	44	44	44	44	44	44	44	44	44	44	44	44	44	44
Providence	50.0	70.0	100.0	85.0	90.0	100.0	110.0	110.0	110.0	117.5	117.5	117.5	117.5	44	44	44	44	44	44	44	44	44	44	44	44	44	44
Richmond	37.5	62.5	72.5	72.5	80.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	48	48	47	47	47	47	47	47	47	47	47	47	47	47
St. Louis	62.5	82.5	100.0	110.0	125.0	150.0	150.0	150.0	150.0	150.0	150.0	150.0	150.0	44	44	44	44	44	44	44	44	44	44	44	44	44	44
St. Paul	50.0	75.0	100.0	80.0	80.0	90.0	90.0	90.0	100.0	100.0	100.0	100.0	100.0	48	44	44	44	44	44	44	44	44	44	44	44	44	44
Salt Lake City	62.5	100.0	112.5	90.0	100.0	106.3	106.3	106.3	106.3	106.3	106.3	112.5	112.5	44	44	44	44	44	44	44	44	44	44	44	44	44	44
San Francisco	62.5	87.5	106.3	104.4	104.4	104.4	104.4	112.5	112.5	112.5	112.5	112.5	112.5	44	44	44	44	44	44	44	44	44	44	44	44	44	44
Seranton	42.5	70.0	87.5	87.5	93.8	112.5	112.5	112.5	125.0	125.0	125.0	118.8	125.0	44	44	44	44	44	44	44	44	44	44	44	44	44	44
Seattle	56.3	93.8	100.0	87.5	100.0	100.0	112.5	112.5	112.5	112.5	112.5	112.5	112.5	44	44	44	44	44	44	44	44	44	44	44	44	44	44
Washington	50.0	87.5	95.0	105.0	105.0	112.5	112.5	112.5	125.0	125.0	125.0	137.5	137.5	44	44	44	44	44	44	44	44	44	44	44	44	44	44

Cement finishers

Atlanta	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	44	44	44	44	44	44	44	44	44	44	44	44	44
Baltimore	75.0	100.0	100.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	137.5	137.5	44	44	44	44	44	44	44	44	44	44	44	44	44
Boston	62.5	75.0	100.0	100.0	105.0	110.0	110.0	137.5	137.5	137.5	137.5	137.5	137.5	48	44	44	44	44	44	44	44	44	44	44	44	44
Buffalo	50.0	65.0	100.0	85.0	100.0	112.5	112.5	112.5	112.5	112.5	112.5	112.5	112.5	48	48	44	44	44	44	44	44	44	44	44	44	44

UNION SCALES OF WAGES AND HOURS OF LABOR IN SPECIFIED OCCUPATIONS, 1913 TO 1931, BY CITIES—Continued

Compositors: Book and job

City	Rates per hour (cents)										Hours per week																
	1913	1919	1920	1922	1923	1924	1925	1926	1927	1928	1929	1930	1931	1913	1919	1920	1922	1923	1924	1925	1926	1927	1928	1929	1930	1931	
Atlanta.....	34.4	43.8	57.5	80.0	80.0	80.0	80.0	80.0	100.0	100.0	100.0	100.0	100.0	100.0	48	48	48	44	44	44	44	44	44	44	44	44	44
Baltimore.....	37.5	54.2	81.3	83.3	90.9	90.9	90.9	90.9	90.9	90.9	90.9	90.9	90.9	90.9	48	48	48	48	44	44	44	44	44	44	44	44	44
Birmingham.....	40.6	44.8	76.0	80.0	80.0	80.0	80.0	92.5	92.5	92.5	92.5	92.5	92.5	92.5	48	48	48	44	44	44	44	44	44	44	44	44	44
Boston.....	41.7	55.2	72.9	87.0	87.0	92.0	92.0	92.0	96.0	96.0	96.0	96.0	96.0	96.0	48	48	48	44	44	44	44	44	44	44	44	44	44
Buffalo.....	39.6	59.4	71.9	90.9	90.9	90.9	90.9	100.0	100.0	100.0	100.0	100.0	100.0	100.0	48	48	48	44	44	44	44	44	44	44	44	44	44
Charleston, S. C.....	33.3	37.5	37.5	98.9	90.9	84.1	90.9	84.1	84.1	84.1	84.1	84.1	84.1	84.1	48	48	48	44	44	44	44	44	44	44	44	44	44
Chicago.....	46.9	75.0	95.8	106.0	110.0	115.9	115.9	115.9	122.7	122.7	122.7	122.7	122.7	122.7	48	48	48	44	44	44	44	44	44	44	44	44	44
Cincinnati.....	40.6	61.0	75.0	104.5	104.5	109.1	109.1	109.1	113.6	113.6	113.6	113.6	113.6	113.6	48	48	48	44	44	44	44	44	44	44	44	44	44
Cleveland.....	39.6	62.5	87.5	93.8	93.8	100.0	104.5	106.8	109.1	109.1	109.1	111.4	111.4	111.4	48	48	48	44	44	44	44	44	44	44	44	44	44
Dallas.....	52.1	70.8	88.5	93.2	93.2	93.2	93.2	93.2	93.2	93.2	93.2	93.2	93.2	93.2	48	48	48	44	44	44	44	44	44	44	44	44	44
Denver.....	54.2	65.6	81.3	95.5	95.5	95.5	102.3	102.3	102.3	102.3	102.3	102.3	102.3	102.3	48	48	48	44	44	44	44	44	44	44	44	44	44
Detroit.....	38.5	72.9	92.7	105.0	105.0	105.0	105.0	110.0	115.0	115.0	120.0	125.0	125.0	125.0	48	48	48	44	44	44	44	44	44	44	44	44	44
Fall River.....	33.3	41.7	62.5	72.7	72.7	81.8	81.8	81.8	81.8	81.8	81.8	81.8	81.8	81.8	48	48	48	44	44	44	44	44	44	44	44	44	44
Indianapolis.....	43.8	54.2	75.0	92.7	95.5	95.5	98.0	100.0	102.3	102.3	102.3	102.3	102.3	102.3	48	48	48	44	44	44	44	44	44	44	44	44	44
Jacksonville.....	37.5	52.1	75.0	81.8	81.8	81.8	81.8	81.8	81.8	81.8	81.8	81.8	81.8	81.8	48	48	48	44	44	44	44	44	44	44	44	44	44
Kansas City, Mo.....	41.7	54.2	72.9	84.4	88.6	92.0	94.3	96.6	98.9	98.9	98.9	98.9	98.9	98.9	48	48	48	48	44	44	44	44	44	44	44	44	44
Little Rock.....	37.5	43.8	72.9	70.0	70.0	70.0	85.2	96.6	96.6	96.6	92.0	92.0	94.3	94.3	48	48	48	44	44	44	44	44	44	44	44	44	44
Los Angeles.....	46.9	58.3	75.0	95.5	95.5	102.3	102.3	102.3	106.8	106.8	106.8	106.8	106.8	106.8	48	48	48	44	44	44	44	44	44	44	44	44	44
Louisville.....	37.5	45.8	45.8	70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0	48	48	48	44	44	44	44	44	44	44	44	44	44
Manchester.....	35.4	41.7	66.7	70.5	70.5	70.5	70.5	70.5	70.5	70.5	70.5	70.5	70.5	70.5	48	48	48	44	44	44	44	44	44	44	44	44	44
Memphis.....	40.0	55.4	63.8	82.3	82.3	82.3	80.0	80.0	81.8	81.8	81.8	81.8	81.8	81.8	48	48	48	44	44	44	44	44	44	44	44	44	44
Milwaukee.....	41.7	54.2	72.9	93.2	93.2	93.2	93.2	95.5	95.5	95.5	95.5	95.5	95.5	95.5	48	48	48	44	44	44	44	44	44	44	44	44	44
Minneapolis.....	43.8	54.0	87.5	95.5	95.5	95.5	95.5	95.5	95.5	95.5	95.5	95.5	95.5	95.5	48	48	48	44	44	44	44	44	44	44	44	44	44
Newark, N. J.....	47.9	72.9	91.7	102.3	109.1	115.9	115.9	118.2	120.5	122.7	122.7	125.0	127.3	129.5	48	48	48	44	44	44	44	44	44	44	44	44	44
New Haven.....	40.6	45.8	58.3	80.4	80.4	80.4	80.4	86.4	86.4	86.4	86.4	86.4	86.4	86.4	48	48	48	44	44	44	44	44	44	44	44	44	44
New Orleans.....	43.8	50.0	71.9	78.4	78.4	78.4	78.4	78.4	78.4	78.4	78.4	78.4	78.4	78.4	48	48	48	44	44	44	44	44	44	44	44	44	44
New York.....	50.0	75.0	93.8	113.6	113.6	120.5	120.5	122.7	125.0	127.3	129.5	131.8	134.1	136.4	48	48	48	44	44	44	44	44	44	44	44	44	44
Omaha.....	37.5	68.8	87.5	93.2	93.2	93.2	93.2	93.2	93.2	93.2	93.2	93.2	93.2	93.2	48	48	48	44	44	44	44	44	44	44	44	44	44
Philadelphia.....	39.6	60.4	89.6	89.6	89.6	89.6	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	48	48	48	44	44	44	44	44	44	44	44	44	44
Pittsburgh.....	39.6	60.4	81.3	100.0	100.0	100.0	100.0	100.0	104.5	104.5	104.5	104.5	104.5	104.5	48	48	48	44	44	44	44	44	44	44	44	44	44

UNION SCALES OF WAGES AND HOURS OF LABOR IN SPECIFIED OCCUPATIONS, 1913 TO 1931, BY CITIES—Continued
Compositors, daywork: Newspaper—Continued

City	Rates per hour (cents)												Hours per week													
	1913	1919	1920	1922	1923	1924	1925	1926	1927	1928	1929	1930	1931	1913	1919	1920	1922	1923	1924	1925	1926	1927	1928	1929	1931	
New York	66.7	96.7	122.2	122.2	122.2	128.9	133.3	133.3	140.0	142.2	144.4	144.4	144.4	144.4	45	45	45	45	45	45	45	45	45	45	45	45
Omaha	50.0	68.8	87.5	87.5	87.5	90.6	90.6	90.6	96.9	97.9	99.0	100.0	100.0	100.0	45	45	45	45	45	45	45	45	45	45	45	45
Philadelphia	41.7	66.7	81.3	79.2	79.2	87.5	87.5	87.5	91.3	91.3	91.3	91.3	91.3	91.3	45	45	45	45	45	45	45	45	45	45	45	45
Pittsburgh	55.0	77.0	87.5	111.8	118.9	121.1	121.1	125.6	126.7	126.7	126.7	128.9	128.9	128.9	45	45	45	45	45	45	45	45	45	45	45	45
Portland, Ore.	68.3	100.0	106.7	106.7	106.7	106.7	106.7	106.7	106.7	106.7	113.3	113.3	113.3	113.3	45	45	45	45	45	45	45	45	45	45	45	45
Providence	47.9	66.7	87.5	95.8	95.8	104.2	104.2	104.2	108.3	108.3	108.3	112.5	116.7	116.7	45	45	45	45	45	45	45	45	45	45	45	45
Richmond, Va.	33.3	45.8	53.3	87.5	87.5	87.5	87.5	94.8	94.8	94.8	94.8	94.8	94.8	94.8	45	45	45	45	45	45	45	45	45	45	45	45
St. Louis	58.7	63.4	91.3	91.3	91.3	102.2	105.5	110.9	110.9	114.1	114.1	120.7	120.7	120.7	45	45	45	45	45	45	45	45	45	45	45	45
St. Paul	54.5	63.0	87.5	88.8	88.8	93.8	101.3	101.3	101.3	101.3	101.3	101.3	101.3	101.3	45	45	45	45	45	45	45	45	45	45	45	45
Salt Lake City	62.5	71.9	87.5	96.9	96.9	96.9	104.3	104.3	104.3	104.3	104.3	104.3	104.3	104.3	45	45	45	45	45	45	45	45	45	45	45	45
San Francisco	64.4	75.6	93.3	107.8	107.8	107.8	115.6	115.6	115.6	120.0	120.0	120.0	120.0	120.0	45	45	45	45	45	45	45	45	45	45	45	45
Scranton	47.9	60.4	81.3	87.5	95.8	95.8	104.2	110.4	112.5	114.9	114.9	114.9	114.9	114.9	45	45	45	45	45	45	45	45	45	45	45	45
Seattle	75.0	100.0	114.3	114.3	114.3	121.4	121.4	121.4	123.2	123.2	123.2	123.2	123.2	123.2	45	45	45	45	45	45	45	45	45	45	45	45
Washington	60.7	92.9	104.0	104.0	104.0	110.0	110.0	128.6	128.6	128.6	128.6	128.6	128.6	128.6	45	45	45	45	45	45	45	45	45	45	45	45

Electrotypers: Finishers

Atlanta	45.8	57.3	88.5	93.2	93.2	96.6	102.3	102.3	102.3	102.3	93.6	93.6	96.6	102.3	48	45	48	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44</
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[illegible]

[651]

Electrotypers: Molders

[illegible]^a 44 h ours per week, June to September, inclusive.² Maximum: minimum, 45 hours per week.¹⁶ Minimum: maximum. 8 hours per day.

UNION SCALES OF WAGES AND HOURS OF LABOR IN SPECIFIED OCCUPATIONS, 1913 TO 1931, BY CITIES—Continued

Electrotypers: Molders—Continued

City	Rates per hour (cents)										Hours per week																
	1913	1919	1920	1922	1923	1924	1925	1926	1927	1928	1929	1930	1931	1913	1919	1920	1922	1923	1924	1925	1926	1927	1928	1929	1930	1931	
Indianapolis	45.8	65.9	65.9	85.2	100.0	95.5	95.5	95.5	95.5	100.0	100.0	104.5	106.8	48	44	44	44	44	44	44	44	44	44	44	44	44	44
Kansas City,																											
Mo.	43.8	62.5	90.6	95.8	95.8	100.0	104.5	104.5	104.5	104.5	104.5	103.1	113.6	48	48	48	48	48	46	44	44	44	44	44	44	44	
Los Angeles	50.0	70.8	86.4	96.4	102.3	102.3	102.3	102.3	102.3	102.3	102.3	102.3	102.3	48	48	44	44	44	44	44	44	44	44	44	44	44	
Louisville																											
Memphis	45.8	62.5	62.5																								
Milwaukee	43.8	56.3	75.0	81.3	81.3	93.8	93.8	93.8	93.8	93.8	93.8	102.3	113.6	48	48	48	48	48	48	48	48	48	48	48	48	44	
Minneapolis	36.1	59.4	81.3	91.7	87.5	95.8	95.8	95.8	95.8	97.9	97.9	100.0	100.0	54	48	48	48	48	48	48	48	48	48	48	48	48	
Newark, N. J.																											
New Haven	37.4	46.7	62.5	75.0	79.5	79.5	79.5	79.5	79.5	140.9	140.9	145.5	150.0	54	53½	44	44	44	44	44	44	44	44	44	44	47½	
New York	62.5	75.0	109.0	134.1	134.1	140.9	140.9	140.9	140.9	140.9	140.9	145.5	150.0	44	44	44	44	44	44	44	44	44	44	44	44	44	
Omaha	43.8	66.7	113.6	102.3	102.3	102.3	102.3	102.3	102.3	102.3	102.3	102.3	102.3	48	48	44	44	44	44	44	44	44	44	44	44	44	
Philadelphia	45.8	70.0	113.1	113.6	125.0	125.0	114.6	114.6	114.6	118.8	118.8	131.8	134.1	48	48	44	44	44	44	44	48	48	48	48	44	44	
Pittsburgh	50.0	53.1	87.5	79.2	87.5	91.7	91.7	91.7	91.7	93.8	93.8	93.8	104.2	48	48	48	48	48	48	48	48	48	48	48	48	44	
Portland,																											
Oreg.	50.0	90.9	104.5	104.5	104.5	111.4	114.8	114.8	114.8	119.3	119.3	119.3	119.3	48	48	44	44	44	44	44	44	44	44	44	44	44	
Richmond	60.4	78.1	93.8	104.2	104.2	104.2	104.2	104.2	104.2																		
St. Louis	47.9	57.3	85.4	89.6	93.8	102.2	106.1	111.4	113.6	113.6	113.6	115.9	120.5	48	48	48	48	48	46½	44	44	44	44	44	44	44	
St. Paul	50.0	59.4	81.3	91.7	87.5	95.8	95.8	95.8	95.8	97.9	97.9	97.9	100.0	48	48	48	48	48	48	48	48	48	48	48	48	44	
San Francisco	54.3	62.5	79.2	113.6	113.6	113.6	125.0	125.0	125.0	125.0	125.0	125.0	125.0	48	48	48	48	48	44	44	44	44	44	44	44	44	
Scranton	47.9	56.3	75.0	90.9	90.9	97.7	97.7	97.7	97.7	102.3	102.3	102.3	106.8	48	48	48	44	44	44	44	44	44	44	44	44	44	
Seattle	52.1	77.8	104.5	104.5																							
Washington	50.0	58.3	93.8	90.9	90.9	102.3	102.3	102.3	102.3	113.6	113.6	113.6	113.6	44	48	48	44	44	44	44	44	44	44	44	44	44	

Granite cutters, inside

Baltimore	50.0	75.0	100.0	100.0	100.0	112.5	112.5	112.5	112.5	112.5	112.5	112.5	112.5	44	44	44	44	44	44	44	44	44	44	44	44	44
Boston	45.6	75.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	110.0	110.0	110.0	124.0	44	44	44	44	44	44	44	44	44	44	44	44	44
Buffalo	43.8	75.0	100.0	100.0	100.0	100.0	106.3	106.3	112.5	112.5	112.5	112.5	118.8	44	44	44	44	44	44	44	44	44	44	44	44	40
Charleston, S. C.	45.0	60.0	87.5	100.0	100.0	100.0	100.0	100.0	100.0	105.0	105.0	105.0	105.0	44	44	44	40	40	44	44	44	44	44	44	44	37 44
Chicago	50.0	76.3	96.3	112.5	112.5	112.5	112.5	112.5	112.5	112.5	112.5	112.5	150.0	44	44	44	44	44	44	44	44	44	44	44	44	40
Cincinnati	-----	75.0	100.0	100.0	100.0	112.5	112.5	112.5	112.5	112.5	112.5	112.5	112.5	-----	44	44	40	44	44	44	44	44	44	44	44	36 44

Cleveland	50.0	81.3	100.0	100.0	106.3	106.3	115.6	115.6	115.6	115.6	118.8	125.0	125.0	44	44	44	40	44	136	44	136	44	136	44	39	44
Denver	57.0	85.0	100.0	106.3	106.3	106.3	112.5	112.5	112.5	112.5	112.5	112.5	112.5	44	44	44	44	44	44	44	44	44	44	44	44	44
Detroit	45.0	75.0	100.0	100.0	100.0	100.0	100.0	112.5	112.5	112.5	112.5	112.5	112.5	44	44	44	44	44	44	44	44	44	44	44	44	44
Fall River	43.0	75.0	100.0	100.0	100.0	100.0	100.0	110.0	110.0	110.0	110.0	115.0	115.0	44	44	44	44	44	44	44	44	44	44	44	44	44
Kansas City, Mo.							100.0	106.3	106.3																	44
Los Angeles	62.5	87.5	100.0	112.5	112.5									48	44	44	44	44							40	40
Manchester	40.6	72.5	100.0	100.0	100.0	100.0	100.0	100.0	112.5	112.5	112.5	112.5	112.5	44	44	44	44	44	44	44	44	44	44	44	44	44
Minneapolis							100.0																			44
Newark, N. J.	50.0	79.0	100.0	112.5	112.5	112.5	137.5	137.5	137.5	137.5	137.5	150.0	150.0	44	44	44	44	44	40	44	44	44	44	44	40	40
New Haven	41.0	72.5	87.5	100.0	100.0	100.0	112.5	112.5	112.5	112.5	112.5	112.5	112.5	44	44	44	44	44	44	44	44	44	44	44	44	44
New Orleans	45.0	75.0	80.0	100.0	100.0	100.0	100.0	112.5	112.5	112.5	112.5	112.5	112.5	45	44	44	44	44	44	44	44	44	44	44	44	44
New York	50.0	79.0	100.0	112.5	112.5	112.5	137.5	137.5	137.5	137.5	137.5	150.0	150.0	44	44	44	44	44	44	44	44	44	44	44	40	40
Philadelphia	50.0	80.0	100.0	100.0	112.5	112.5	112.5	112.5	112.5	112.5	125.0	125.0	125.0	44	44	44	44	44	44	44	44	44	44	44	44	44
Pittsburgh	50.0	81.3	100.0	100.0	112.5	112.5	112.5	125.0	125.0	125.0	125.0	125.0	125.0	44	44	44	44	44	44	44	44	44	44	44	44	44
Portland,																										
Oreg.	40.6	70.0	70.0	100.0	100.0	100.0	110.0	112.5	112.5	112.5	112.5	112.5	112.5	44	44	44	44	44	44	44	44	44	44	44	44	44
Providence																										
Richmond,	43.8	70.0	82.5	100.0	100.0	100.0	112.5	112.5	112.5	112.5	112.5	112.5	112.5	44	44	44	44	44	44	44	44	44	44	44	44	44
Va.	50.0	75.0	100.0	100.0	100.0	112.5	112.5	112.5	112.5	112.5	112.5	112.5	112.5	44	44	44	44	44	44	44	44	44	44	44	44	44
St. Louis																										
St. Paul,																										
Minn.																										
Salt Lake																										
City	62.5	81.3	100.0	112.5	112.5	112.5	112.5	112.5	112.5	112.5	112.5	112.5	112.5	44	44	44	44	44	44	44	44	44	44	44	44	44
Scranton																										
Seattle	62.5	87.5	100.0	112.5	112.5	112.5	112.5	112.5	112.5	112.5	112.5	112.5	112.5	44	44	44	40	40	44	44	44	44	44	44	44	44
Washington	45.0	87.5	100.0	100.0	112.5	112.5	112.5	125.0	125.0	125.0	125.0	125.0	125.0	44	44	44	44	44	44	44	44	44	44	44	44	44

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Hod carriers

	1870	1880	1890	1900	1910	1920	1930	1940	1950	1960	1970	1980	1990	2000
Boston	35.0	50.0	70.0	70.0	70.0	79.0	79.0	85.0	85.0	44	44	44	44	44
Buffalo	40.0	50.0	60.0	75.0	75.0	82.5	90.0	90.0	97.5	44	44	44	44	44
Chicago	40.0	57.5	100.0	72.5	72.5	87.5	97.5	97.5	97.5	44	44	44	44	44
Cincinnati	42.5	65.0	85.0	90.0	92.5	95.0	97.5	97.5	100.0	45	45	45	45	45
Cleveland	31.3	57.5	87.5	82.5	87.5	87.5	87.5	87.5	87.5	48	44	44	44	40

40 hours per week, June to February, inclusive.

40 hours per week, Oct. 16 to Mar. 15.

40 hours per week, Nov. 16 to Mar. 15.

140 hours per week, November to February, inclusive.

at 40 hours per week, January, February, June to August, inclusive, and December.

40 hours per week, November to April, inclusive.
40 hours per week, Nov. 16 to Apr. 15.

40 hours per week, Nov. 16 to Apr. 15.

: 40 hours per week, June to August, inclusive.

48 hours per week, Nov. 16 to Mar. 15.

\$44 hours per week, October to April, inclusive.

Old scale; strike pending.

40 hours per week, July to March, inclusive.

at least 40 hours per week, November to March, inclusive.

or 40 hours per week, October to March, inclusive.

UNION SCALES OF WAGES AND HOURS OF LABOR IN SPECIFIED OCCUPATIONS, 1913 TO 1931, BY CITIES—Continued
Hod carriers—Continued

City	Rates per hour (cents)										Hours per week																
	1913	1919	1920	1922	1923	1924	1925	1926	1927	1928	1929	1930	1931	1913	1919	1920	1922	1923	1924	1925	1926	1927	1928	1929	1930	1931	
Denver.....	{37.5 40.6 35.0}	{65.6 78.1 65.0}	{75.0 78.1 100.0}	75.0	75.0	81.3 84.4 75.0	81.3 84.4 75.0	81.3 84.4 75.0	{81.3 84.4 75.0}	81.3 84.4 75.0	81.3 84.4 75.0	81.3 84.4 75.0	81.3 84.4 75.0	{44 48 44}	44	44	44	44	44	44	44	44	44	44	44	44	40
Detroit.....	{40.6 35.0}	{65.0 72.5 55.0}	{75.0 78.1 100.0}	75.0	75.0	81.3 84.4 75.0	81.3 84.4 75.0	81.3 84.4 75.0	{81.3 84.4 75.0}	81.3 84.4 75.0	81.3 84.4 75.0	81.3 84.4 75.0	81.3 84.4 75.0	48	44	44	44	49½	49½	44	44	44	44	44	44	44	43
Indianapolis..	{40.0 42.5}	{65.0 72.5 55.0}	{75.0 78.1 100.0}	75.0	75.0	81.3 84.4 75.0	81.3 84.4 75.0	81.3 84.4 75.0	{81.3 84.4 75.0}	81.3 84.4 75.0	81.3 84.4 75.0	81.3 84.4 75.0	81.3 84.4 75.0	44	44	44	44	44	44	44	44	44	44	44	44	44	40
Kansas City..	37.5	62.5	90.0	80.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	44	44	44	44	44	44	44	44	44	44	44	44	44	40
Mo.....	{35.0 38.0}	{50.0 55.0}	80.0	80.0	85.0	85.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	48	50	44	44	44	44	44	44	44	44	44	44	44	44
Louisville....	30.0	50.0	75.0	62.5	62.5	75.0	62.5	62.5	62.5	62.5	62.5	62.5	62.5	44	44	44	44	44	44	44	44	44	44	44	44	44	40
Memphis.....	35.0	50.0	87.5	75.0	87.5	100.0	100.0	112.5	112.5	112.5	112.5	125.0	125.0	44	44	44	44	44	44	44	44	44	44	44	44	44	40
Newark, N. J..	28.0	50.0	75.0	65.0	65.0	65.0	65.0	67.5	75.0	75.0	75.0	85.0	85.0	44	44	44	44	44	44	44	44	44	44	44	44	44	40
New Haven....	28.0	50.0	75.0	65.0	65.0	65.0	65.0	67.5	75.0	75.0	75.0	85.0	85.0	44	44	44	44	44	44	44	44	44	44	44	44	44	40
New York.....	37.5	50.0	87.5	112.5	112.5	112.5	112.5	112.5	112.5	112.5	112.5	123.8	123.8	44	44	44	44	44	44	44	44	44	44	44	44	44	40
Philadelphia..	35.0	70.0	100.0	85.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	85.0	85.0	44	44	44	44	44	44	44	44	44	44	44	44	44	44
Pittsburgh....	{25.0 40.0}	{60.0 90.0}	90.0	80.0	100.0	100.0	100.0	112.5	112.5	112.5	112.5	112.5	112.5	{44 49}	44	44	44	44	44	44	44	44	44	44	44	44	44
Portland, Oreg.	50.0	75.0	93.8	90.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	112.5	48	44	44	44	44	44	44	44	44	44	44	44	44	40
St. Louis.....	{42.5 45.0}	{62.5 65.0}	{70.0 85.0}	85.0	100.0	115.0	115.0	115.0	115.0	115.0	115.0	115.0	115.0	44	44	44	44	44	44	44	44	44	44	44	44	44	40
St. Paul.....	60.0	80.0	80.0	75.0	85.0	85.0	85.0	85.0	85.0	85.0	85.0	85.0	85.0	44	44	44	44	44	44	44	44	44	44	44	44	44	44
Salt Lake City..	{37.5 50.0}	{62.5 93.8}	87.5	75.0	87.5	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	44	44	44	44	44	44	44	44	44	44	44	44	44	44
San Francisco	50.0	75.0	93.8	71.3	77.2	77.2	87.5	87.5	87.5	87.5	87.5	87.5	87.5	44	44	44	44	46½	46½	44	44	44	44	44	44	44	40
San Antonio..	30.0	50.0	58.5	60.0	60.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0	48	44	44	44	44	44	44	44	44	44	44	44	44	40
Scranton.....	30.0	50.0	58.5	60.0	60.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0	44	40	40	40	40	40	40	40	40	40	40	40	40	40
Seattle.....	43.8	75.0	75.0	60.0	60.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0	44	40	40	40	40	40	40	40	40	40	40	40	40	40
Inside wiremen																											
Atlanta.....	75.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	44	44	44	44	44	44	44	44	44	44	44	44	44	44
Baltimore....	43.8	70.0	92.5	100.0	100.0	120.0	131.3	131.3	143.8	143.8	150.0	165.0	165.0	48	44	44	44	44	44	44	44	44	44	44	44	44	44
Birmingham..	62.5	80.0	100.0	85.0	100.0	112.5	112.5	112.5	125.0	125.0	125.0	125.0	125.0	44	44	44	44	44	44	44	44	44	44	44	44	44	40
Boston.....	55.0	77.5	100.0	100.0	105.0	110.0	110.0	120.0	125.0	125.0	125.0	137.5	137.5	44	44	44	44	44	44	44	44	44	44	44	44	44	40
Buffalo.....	45.0	70.0	90.0	90.0	100.0	112.5	112.5	125.0	125.0	125.0	125.0	137.5	137.5	48	44	44	44	44	44	44	44	44	44	44	44	44	40

Inside wiremen

Atlanta.....	43.8	75.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	44	44	44	44	44	44	44	44	44	44	44	44	44
Baltimore....	62.5	80.0	92.5	100.0	100.0	120.0	120.0	131.3	131.3	143.8	143.8	165.0	165.0	44	44	44	44	44	44	44	44	44	44	44	44	40
Birmingham..	55.0	80.0	100.0	85.0	100.0	112.5	112.5	112.5	112.5	125.0	125.0	125.0	125.0	44	44	44	44	44	44	44	44	44	44	44	44	40
Boston.....	55.0	77.5	90.0	100.0	100.0	110.0	110.0	120.0	120.0	125.0	125.0	137.5	137.5	44	44	44	44	44	44	44	44	44	44	44	44	40
Buffalo.....	45.0	70.0	90.0	90.0	100.0	112.5	112.5	125.0	125.0	137.5	137.5	137.5	137.5	48	44	44	44	44	44	44	44	44	44	44	44	40

Chicago	75.0	87.5	125.0	110.0	110.0	125.0	150.0	150.0	156.3	162.5	162.5	162.5	102.5	44	44	44	44	44	44
Cincinnati	50.0	71.9	100.0	96.0	105.0	115.0	125.0	131.3	135.0	137.5	137.5	140.0	140.0	44	44	44	44	44	44
Cleveland	57.5	90.0	125.0	110.0	125.0	135.0	143.8	150.0	150.0	150.0	150.0	150.0	150.0	44	44	44	44	44	44
Dallas	56.3	87.5	100.0	112.5	112.5	112.5	125.0	125.0	125.0	125.0	137.5	137.5	137.5	44	44	44	44	44	44
Denver	56.3	82.5	100.0	100.0	112.5	112.5	125.0	137.5	137.5	137.5	137.5	137.5	137.5	44	44	44	44	44	44
Detroit	46.9	93.8	125.0	100.0	100.0	125.0	130.0	140.0	150.0	150.0	155.0	155.0	155.0	44	44	44	44	44	44
Fall River	37.5	70.0	85.0	85.0	95.0	95.0	95.0	95.0	95.0	100.0	100.0	100.0	100.0	44	44	44	44	44	44
Indianapolis	47.5	72.0	100.0	100.0	110.0	115.0	125.0	125.0	137.5	150.0	150.0	150.0	125.0	44	44	44	44	44	44
Jacksonville	45.0	85.0	100.0	85.0	85.0	85.0	100.0	125.0	125.0	125.0	125.0	125.0	125.0	44	44	44	44	44	44
Kansas City, Mo.	62.5	87.5	100.0	100.0	106.3	125.0	125.0	125.0	125.0	125.0	137.5	150.0	150.0	44	44	44	44	44	44
Little Rock	50.0	75.0	87.5	87.5	87.5	87.5	87.5	87.5	87.5	87.5	87.5	87.5	87.5	44	44	44	44	44	44
Louis Angeles	50.0	80.0	100.0	100.0	112.5	112.5	112.5	112.5	112.5	100.0	100.0	100.0	100.0	44	44	44	44	44	44
Louisville	40.0	75.0	75.0	90.0	100.0	100.0	106.3	106.3	115.0	125.0	131.3	131.3	131.3	44	44	44	44	44	44
Manchester	31.3	75.0	100.0	80.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	44	44	44	44	44	44
Memphis	45.0	75.0	100.0	87.5	87.5	87.5	100.0	100.0	100.0	112.5	112.5	125.0	125.0	44	44	44	44	44	44
Milwaukee	45.0	75.0	85.0	100.0	100.0	112.5	112.5	112.5	112.5	120.0	125.0	125.0	125.0	44	44	44	44	44	44
Minneapolis	50.0	68.8	81.3	87.5	87.5	100.0	100.0	100.0	100.0	100.0	112.5	112.5	112.5	44	44	44	44	44	44
Newark, N.J.	56.3	75.0	100.0	112.5	112.5	131.3	131.3	150.0	156.3	162.5	162.5	175.0	175.0	44	44	44	44	44	44
New Haven	-----	75.0	82.5	85.0	90.0	100.0	100.0	100.0	100.0	106.3	112.5	125.0	125.0	44	44	44	44	44	44
New Orleans	45.0	70.0	90.0	100.0	90.0	105.0	110.0	110.0	120.0	125.0	125.0	125.0	125.0	44	44	44	44	44	44
New York	56.3	75.0	112.5	112.5	112.5	131.3	131.3	150.0	150.0	150.0	165.0	165.0	165.0	44	44	44	44	44	44
Omaha	50.0	87.5	112.5	100.0	112.5	112.5	112.5	125.0	125.0	125.0	125.0	125.0	125.0	44	44	44	44	44	44
Philadelphia	45.0	75.0	100.0	90.0	100.0	112.5	112.5	125.0	125.0	125.0	125.0	150.0	150.0	44	44	44	44	44	44
Pittsburgh	57.5	75.0	100.0	112.5	125.0	125.0	143.8	143.8	150.0	156.3	156.3	156.3	156.3	44	44	44	44	44	44
Portland, Oreg.	56.3	80.0	100.0	90.0	100.0	112.5	112.5	125.0	125.0	125.0	125.0	125.0	125.0	44	44	40	40	40	40
Providence	43.8	70.0	85.0	90.0	90.0	100.0	100.0	100.0	110.0	110.0	110.0	110.0	110.0	44	44	44	44	44	44
Richmond, Va	43.8	75.0	75.0	75.0	75.0	75.0	75.0	75.0	75.0	87.5	87.5	87.5	87.5	44	44	44	44	44	44
St. Louis	65.0	87.5	100.0	125.0	125.0	150.0	150.0	150.0	150.0	150.0	165.0	165.0	165.0	44	44	44	44	44	44
St. Paul	46.9	68.8	81.3	80.0	80.0	100.0	87.5	100.0	100.0	100.0	112.5	112.5	112.5	44	44	44	44	44	44
Salt Lake City	56.3	87.5	112.5	90.0	100.0	-----	-----	-----	-----	112.5	112.5	112.5	112.5	44	44	-----	-----	44	44
San Fran- cisco	62.5	87.5	112.5	100.0	100.0	100.0	106.3	106.3	112.5	112.5	112.5	112.5	112.5	44	44	44	44	44	44
Seranton	46.9	75.0	95.0	87.5	87.5	112.5	112.5	112.5	112.5	112.5	112.5	112.5	112.5	44	44	44	44	44	44
Seattle	62.5	100.0	112.5	100.0	106.3	112.5	125.0	125.0	125.0	125.0	137.5	137.5	137.5	44	44	40	40	40	40
Washington	55.0	100.0	100.0	106.3	112.5	125.0	137.5	137.5	137.5	137.5	150.0	150.0	165.0	44	44	44	44	40	40

44 hours per week, June to September, inclusive.
44 hours per week, July to September, inclusive.

40 hours per week, June to August, inclusive.
44 hours per week. September to April, inclusive.

UNION SCALES OF WAGES AND HOURS OF LABOR IN SPECIFIED OCCUPATIONS, 1913 TO 1931, BY CITIES—Continued

Painters

City	Rates per hour (cents)										Hours per week																
	1913	1919	1920	1922	1923	1924	1925	1926	1927	1928	1929	1930	1931	1913	1919	1920	1922	1923	1924	1925	1926	1927	1928	1929	1930	1931	
Atlanta.....	33.3	60.0	60.0	75.0	75.0	75.0	75.0	80.0	85.0	85.0	85.0	85.0	85.0	53	44	44	44	44	44	44	44	44	44	44	44	44	44
Baltimore.....	37.5	68.8	90.0	80.0	80.0	90.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	48	44	44	44	44	44	44	44	44	44	44	44	44	44
Birmingham.....	45.0	75.0	87.5	75.0	87.5	87.5	100.0	100.0	100.0	100.0	100.0	100.0	100.0	48	44	44	44	44	44	44	44	44	44	44	44	44	44
Boston.....	50.0	82.5	100.0	100.0	105.0	110.0	110.0	125.0	125.0	125.0	125.0	137.5	137.5	48	44	40	40	40	40	40	40	40	40	40	40	40	40
Buffalo.....	43.8	62.5	87.5	87.5	87.5	87.5	100.0	100.0	112.5	112.5	112.5	125.0	125.0	48	48	48	48	48	48	44	44	44	44	44	44	44	44
Charleston, S. C.....	25.0	50.0	65.0	50.0	55.0	55.0	55.0	55.0	55.0	55.0	55.0	55.0	55.0	48	48	48	48	48	44	44	44	44	44	44	44	44	44
Chicago.....	65.0	87.5	125.0	110.0	125.0	125.0	150.0	150.0	150.0	162.5	162.5	175.0	175.0	44	44	44	44	44	44	44	44	44	44	44	44	44	44
Cincinnati.....	50.0	62.5	87.5	87.5	97.5	107.5	117.5	125.0	131.3	131.3	131.3	133.8	133.8	44	44	44	44	44	44	44	44	44	44	44	44	44	44
Cleveland.....	50.0	75.0	112.5	100.0	112.5	125.0	125.0	125.0	125.0	125.0	125.0	131.3	137.5	44	44	44	44	44	44	44	44	44	44	44	44	44	44
Dallas.....	50.0	87.5	100.0	87.5	100.0	100.0	112.5	112.5	112.5	112.5	112.5	112.5	112.5	44	44	44	44	44	44	44	44	44	44	44	44	44	44
Denver.....	50.0	85.0	100.0	100.0	100.0	112.5	117.5	115.0	125.0	125.0	125.0	125.0	125.0	44	44	44	44	44	44	44	44	44	44	44	44	44	44
Detroit.....	45.0	80.0	100.0	90.0	100.0	112.5	112.5	125.0	125.0	125.0	125.0	125.0	125.0	44	44	44	44	44	44	44	44	44	44	44	44	44	44
Fall River.....	37.5	62.5	100.0	75.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	44	44	44	44	44	44	44	44	44	44	44	44	44	44
Indianapolis.....	47.5	70.0	100.0	90.0	97.5	105.0	105.0	110.0	115.0	122.5	122.5	125.0	125.0	44	44	44	44	44	44	44	44	44	44	44	44	44	44
Jacksonville.....	37.5	75.0	87.5	75.0	75.0	-----	75.0	100.0	100.0	75.0	75.0	75.0	75.0	48	44	44	44	44	-----	44	44	44	44	44	44	44	44
Kansas City, Mo.....	60.0	82.5	100.0	100.0	100.0	112.5	125.0	125.0	125.0	125.0	125.0	125.0	125.0	44	44	44	44	44	44	44	44	44	44	44	44	44	44
Little Rock.....	50.0	80.0	100.0	87.5	87.5	87.5	100.0	100.0	100.0	100.0	100.0	100.0	100.0	48	44	44	44	44	44	44	44	44	44	44	44	44	44
Los Angeles.....	43.8	75.0	87.5	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	48	44	44	44	44	44	44	44	44	44	44	44	44	44
Louisville.....	45.0	62.5	75.0	87.5	100.0	112.5	112.5	112.5	112.5	112.5	112.5	112.5	112.5	48	44	44	44	44	44	44	44	44	44	44	44	44	44
Manchester.....	-----	62.5	80.0	70.0	80.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	-----	44	44	44	44	44	44	44	44	44	44	44	44	44
Memphis.....	50.0	75.0	100.0	87.5	87.5	100.0	100.0	100.0	112.5	112.5	112.5	112.5	112.5	44	44	44	44	44	44	44	44	44	44	44	44	44	44
Milwaukee.....	50.0	70.0	85.0	85.0	100.0	100.0	100.0	112.5	112.5	112.5	112.5	112.5	112.5	44	44	44	44	44	44	44	44	44	44	44	44	44	44
Minneapolis.....	50.0	70.0	100.0	80.0	90.0	90.0	90.0	90.0	100.0	100.0	100.0	100.0	100.0	44	44	44	44	44	44	44	44	44	44	44	44	44	44
Newark, N. J.....	44.0	75.0	100.0	100.0	112.5	125.0	125.0	137.5	137.5	150.0	150.0	150.0	150.0	44	44	44	44	44	44	44	44	44	44	44	44	44	44
New Haven.....	40.9	62.5	87.5	100.0	90.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	44	44	44	44	44	44	44	44	44	44	44	44	44	44
New Orleans.....	40.0	65.0	75.0	80.0	80.0	85.0	85.0	85.0	90.0	90.0	90.0	90.0	90.0	48	44	44	44	44	44	44	44	44	44	44	44	44	44
New York.....	50.0	75.0	112.5	112.5	112.5	131.3	131.3	150.0	150.0	150.0	150.0	150.0	150.0	44	44	40	40	40	40	40	40	40	40	40	40	40	40
Omaha.....	50.0	75.0	100.0	90.0	112.5	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	44	44	44	44	44	44	44	44	44	44	44	44	44	44
Philadelphia.....	42.5	75.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	44	44	44	44	44	44	44	44	44	44	44	44	44	44
Pittsburgh.....	55.0	87.5	112.5	100.0	125.0	137.5	143.8	150.0	150.0	150.0	150.0	150.0	150.0	44	44	44	44	44	44	44	44	44	44	44	44	44	44

Portland, Oreg	50.0	90.0	100.0	100.0	90.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
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Plasterers

Atlanta.....	45.0	60.0	100.0	100.0	100.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	100.0	53	49½	44	44	44	44	44
Baltimore.....	62.5	87.5	112.5	125.0	150.0	175.0	175.0	175.0	175.0	175.0	175.0	175.0	175.0	44	44	44	44	44	44	44
Boston.....	65.0	80.0	100.0	112.5	125.0	150.0	150.0	150.0	150.0	150.0	150.0	162.5	162.5	44	40	40	40	40	40	40
Buffalo.....	60.0	85.0	100.0	100.0	150.0	150.0	150.0	150.0	150.0	150.0	150.0	162.5	162.5	48	44	40	40	40	40	40
Charleston, S. C.....	40.0	75.0	100.0	85.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	18	53	48	48	44	44	44
Chicago.....	75.0	87.5	125.0	110.0	150.0	150.0	150.0	162.5	162.5	162.5	162.5	170.0	170.0	44	44	44	44	44	44	44
Cincinnati.....	68.5	87.5	100.0	112.5	125.0	150.0	150.0	150.0	150.0	150.0	150.0	162.5	162.5	44½	44½	44½	44½	44½	44½	44½
Cleveland.....	62.5	90.0	125.0	125.0	125.0	150.0	150.0	162.5	162.5	162.5	162.5	162.5	162.5	44	44	44	44	44	44	44
Dallas.....	70.0	112.5	112.5	137.5	150.0	162.5	162.5	162.5	162.5	162.5	162.5	162.5	162.5	44	44	44	44	44	44	44
Denver.....	75.0	87.5	125.0	125.0	125.0	150.0	150.0	150.0	150.0	150.0	150.0	150.0	150.0	44	44	44	44	44	44	44
Detroit.....	68.5	87.5	125.0	112.5	150.0	156.3	156.3	162.5	162.5	162.5	162.5	137.5	137.5	44	44	44	44	44	44	44
Fall River.....	55.0	85.0	115.0	95.0	110.0	110.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	48	44	44	44	44	44	44
Indianapolis.....	62.5	87.5	100.0	112.5	131.3	150.0	150.0	150.0	157.5	157.5	157.5	157.5	157.5	44½	44½	44	44	44	44	44
Jacksonville.....	50.3	72.0	87.5	87.5	100.0	125.0	175.0	175.0	125.0	125.0	100.0	100.0	100.0	48	44	44	44	44	44	44
Kansas City, Mo.....	75.0	100.0	120.0	112.5	137.5	150.0	150.0	150.0	150.0	150.0	150.0	150.0	162.5	44	44	44	44	44	44	44
Little Rock.....	62.5	87.5	112.5	112.5	112.5	150.0	150.0	150.0	150.0	150.0	150.0	150.0	150.0	48	44	44	44	44	44	44
Los Angeles.....	75.0	87.5	112.5	125.0	125.0	150.0	150.0	150.0	150.0	150.0	150.0	150.0	150.0	44	44	44	44	44	44	44
Louisville.....	65.0	75.0	100.0	112.5	150.0	150.0	150.0	162.5	162.5	162.5	162.5	162.5	162.5	44	44	44	44	44	44	44
Manchester.....	50.0	90.0	112.5	112.5	112.5	150.0	137.5	137.5	137.5	137.5	150.0	150.0	150.0	48	44	44	44	44	44	44
Memphis.....	75.0	87.5	100.0	112.5	112.5	137.5	156.3	156.3	156.3	156.3	156.3	156.3	156.3	44	44	44	44	44	44	44
Milwaukee.....	65.0	87.5	87.5	112.5	112.5	125.0	137.5	143.8	150.0	150.0	150.0	150.0	150.0	44	44	44	44	44	44	44
Minneapolis.....	70.0	90.0	112.5	100.0	112.5	125.0	125.0	137.5	150.0	150.0	150.0	150.0	150.0	44	44	44	44	44	44	44
Newark, N. J.....	65.0	87.5	125.0	125.0	125.0	150.0	162.5	175.0	175.0	175.0	193.8	193.8	193.8	44	44	44	44	44	44	44
New Haven.....	60.0	82.5	100.0	100.0	112.5	125.0	137.5	137.5	143.8	150.0	150.0	165.0	165.0	44	44	44	44	44	44	44

44 hours per week, Nov. 14 to May 14.

Work 53 hours; paid for 54.

40 hours per week. Nov. 16 to Mar. 15.

40 hours per week, NOV. 10 to MAR. 10.
44 hours per week. July to March, inclusive.

Old scale: strike pending

Old scale; strike pending. 48 hours per week. October to March. Inclusive.

[illegible]

Plumbers

Atlanta.....	44.4	75.0	100.0	100.0	112.5	112.5	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	1
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48 hours per week, November to April, inclusive.

48 hours per
For helpers.

all 44 hours per week, September to April, inclusive.

11 Old scale; strike pending.

UNION SCALES OF WAGES AND HOURS OF LABOR IN SPECIFIED OCCUPATIONS, 1913 TO 1931, BY CITIES—Continued

Plumbers—Continued

City	Rates per hour (cents)												Hours per week														
	1913	1919	1920	1922	1923	1924	1925	1926	1927	1928	1929	1930	1931	1913	1919	1920	1922	1923	1924	1925	1926	1927	1928	1929	1930	1931	
Kansas City, Mo.	62.5	100.0	100.0	112.5	125.0	137.5	137.5	137.5	137.5	137.5	137.5	137.5	150.0	48	44	44	44	44	44	44	44	44	44	44	44	44	40
Little Rock	56.3	87.5	125.0	100.0	100.0	112.5	112.5	112.5	112.5	112.5	112.5	112.5	112.5	48	44	44	44	44	44	44	44	44	44	44	44	44	44
Los Angeles	56.3	81.3	112.5	112.5	112.5	112.5	112.5	112.5	112.5	112.5	112.5	112.5	112.5	48	44	44	44	44	44	44	44	44	44	44	44	44	44
Louisville	60.0	70.0	80.0	100.0	112.5	137.5	137.5	137.5	137.5	137.5	137.5	137.5	137.5	44	44	44	44	44	44	44	44	44	44	44	44	40	40
Manchester	31.3	70.0	100.0	80.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	112.5	48	44	44	44	44	44	44	44	44	44	44	44	40	40
Memphis	62.5	93.8	125.0	112.5	125.0	125.0	131.3	135.0	142.0	150.0	150.0	150.0	150.0	48	44	44	44	44	44	44	44	44	44	44	44	40	40
Milwaukee	62.5	75.0	87.5	90.0	100.0	112.5	112.5	118.8	118.8	118.8	118.8	118.8	118.8	44	44	44	44	44	44	44	44	44	44	44	44	44	44
Minneapolis	56.3	75.0	100.0	87.5	100.0	100.0	100.0	112.5	112.5	112.5	112.5	125.0	125.0	48	44	44	44	44	44	44	44	44	44	44	44	44	44
Newark, N. J.	62.5	87.5	112.5	112.5	112.5	131.3	137.5	150.0	150.0	150.0	150.0	165.0	165.0	44	44	44	44	44	44	44	44	44	44	44	44	40	40
New Haven	50.0	75.0	87.5	87.5	100.0	106.3	106.3	112.5	112.5	112.5	112.5	125.0	125.0	44	44	44	44	44	44	44	44	44	44	44	44	40	40
New Orleans	56.3	80.0	90.0	90.0	90.0	105.0	112.5	125.0	125.0	125.0	105.0	105.0	105.0	48	48	48	44	44	44	44	44	44	44	44	44	44	44
New York	68.8	75.0	112.5	112.5	125.0	137.5	137.5	137.5	150.0	150.0	150.0	165.0	165.0	44	44	44	44	44	44	44	44	44	44	44	44	40	40
Omaha	68.3	87.5	125.0	100.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	44	44	44	44	44	44	44	44	44	44	44	44	44	44
Philadelphia	43.8	80.0	90.0	90.0	115.0	115.0	115.0	115.0	115.0	115.0	115.0	125.0	125.0	44	44	44	44	44	44	44	44	44	44	44	44	40	40
Pittsburgh	62.5	93.8	106.3	112.5	115.6	137.5	143.8	150.0	150.0	156.3	156.3	162.5	171.9	44	44	44	44	44	44	44	44	44	44	44	44	40	40
Portland, Oreg.	75.0	100.0	112.5	106.3	112.5	125.0	125.0	125.0	137.5	137.5	137.5	137.5	137.5	44	44	44	44	44	44	44	44	44	44	44	44	40	40
Providence	56.3	75.0	100.0	100.0	100.0	112.5	125.0	125.0	127.5	127.5	127.5	127.5	135.0	44	44	44	44	44	44	44	44	44	44	44	44	40	40
Richmond	50.0	75.0	75.0	75.0	87.5	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	48	44	44	44	44	44	44	44	44	44	44	44	44	44
St. Louis	66.3	100.0	125.0	125.0	125.0	150.0	150.0	150.0	150.0	150.0	150.0	162.5	162.5	44	44	44	44	44	44	44	44	44	44	44	44	40	40
St. Paul	62.5	75.0	87.5	100.0	100.0	100.0	100.0	112.5	112.5	112.5	112.5	125.0	125.0	44	44	44	44	44	44	44	44	44	44	44	44	44	44
Salt Lake City	75.0	100.0	112.5	100.0	112.5	112.5	120.0	120.0	120.0	120.0	120.0	120.0	120.0	44	44	44	44	44	44	44	44	44	44	44	44	44	40
San Francisco	75.0	75.0	81.3	100.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	48	44	44	44	44	44	44	44	44	44	44	44	40	40
Scranton	50.0	75.0	87.5	87.5	93.8	112.5	112.5	118.8	125.0	125.0	125.0	125.0	125.0	48	44	44	44	44	44	44	44	44	44	44	44	44	44
Seattle	81.3	100.0	112.5	100.0	112.5	125.0	125.0	125.0	137.5	137.5	137.5	137.5	137.5	44	40	40	40	40	40	40	40	40	40	40	40	40	40
Washington	50.0	87.5	100.0	106.3	125.0	125.0	131.3	137.5	137.5	137.5	143.7	150.0	150.0	48	44	44	44	44	44	44	44	44	44	44	44	40	40

UNION SCALES OF WAGES AND HOURS OF LABOR IN SPECIFIED OCCUPATIONS, 1913 TO 1931, BY CITIES—Continued

Stonecutters

City	Rates per hour (cents)										Hours per week															
	1913	1919	1920	1922	1923	1924	1925	1926	1927	1928	1929	1930	1931	1913	1919	1920	1922	1923	1924	1925	1926	1927	1928	1929	1930	1931
Baltimore.....	50.0	75.0	100.0	90.0	100.0	112.5	125.0	125.0	125.0	125.0	125.0	125.0	125.0	44	44	44	44	44	44	44	44	44	44	44	44	44
Boston.....	56.3	70.0	100.0	100.0	110.0	110.0	125.0	125.0	125.0	125.0	137.5	137.5	137.5	44	44	44	44	44	44	44	44	44	44	44	44	44
Buffalo.....	56.3	75.0	100.0	100.0	100.0	120.0	125.0	137.5	137.5	137.5	150.0	150.0	150.0	48	44	44	44	44	44	44	44	44	44	44	44	44
Chicago.....	62.5	81.3	125.0	102.5	102.5	125.0	137.5	150.0	150.0	150.0	150.0	150.0	150.0	44	44	44	44	44	44	44	44	44	44	44	44	44
Cincinnati.....	56.3	77.5	115.0	125.0	125.0	125.0	125.0	132.5	150.0	150.0	150.0	150.0	150.0	44	44	44	44	44	44	44	44	44	44	44	40	40
Cleveland.....	60.0	80.0	112.5	110.0	125.0	125.0	135.0	135.0	137.5	137.5	137.5	137.5	150.0	44	44	44	44	44	44	44	44	44	44	44	40	40
Dallas.....	62.5	87.5	100.0	125.0	125.0	125.0	137.5	137.5	137.5	137.5	137.5	137.5	137.5	44	44	44	44	44	44	44	44	44	44	44	44	44
Denver.....	62.5	87.5	100.0	100.0	112.5	112.5	125.0	125.0	125.0	125.0	125.0	125.0	125.0	44	44	44	44	44	44	44	44	44	44	44	44	44
Detroit.....	62.5	80.0	125.0	112.5	125.0	125.0	137.5	137.5	137.5	137.5	137.5	137.5	137.5	44	44	44	44	44	44	44	44	44	44	44	44	44
Indianapolis.....	56.3	75.0	100.0	100.0	100.0	100.0	112.5	125.0	125.0	125.0	125.0	125.0	125.0	44	44	44	44	44	44	44	44	44	44	44	44	44
Kansas City, Mo.....	56.3	75.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	125.0	125.0	125.0	125.0	44	44	44	44	44	44	44	44	44	44	44	44	44
Little Rock.....	55.0	65.0	100.0	80.0	87.5	112.5	80.0	125.0	125.0	125.0	125.0	125.0	125.0	44	44	44	44	44	44	44	44	44	44	44	44	44
Memphis.....	65.0	75.0	100.0	112.5	125.0	125.0	125.0	137.5	137.5	137.5	137.5	137.5	137.5	44	44	44	44	44	44	44	44	44	44	44	44	44
Milwaukee.....	50.0	-----	100.0	90.0	106.3	112.5	112.5	125.0	125.0	125.0	125.0	125.0	112.5	44	-----	44	44	44	44	44	44	44	44	44	44	44
Minneapolis.....	56.3	75.0	87.5	100.0	112.5	112.5	125.0	125.0	137.5	137.5	131.3	131.3	131.3	44	44	44	44	44	44	44	44	44	44	44	44	44
Newark, N. J.....	68.8	84.4	112.5	112.5	125.0	131.3	137.5	150.0	150.0	150.0	168.8	168.8	168.8	44	44	44	44	44	44	44	44	44	44	44	40	40
New Orleans.....	-----	-----	-----	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	100.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
New York.....	68.8	84.4	100.0	112.5	125.0	131.3	137.5	150.0	150.0	150.0	168.8	168.8	168.8	44	44	44	44	44	44	44	44	44	44	44	40	40
Philadelphia.....	50.0	82.5	135.0	100.0	112.5	125.0	125.0	131.3	131.3	131.3	131.3	131.3	131.3	44	44	44	44	44	44	44	44	44	44	44	44	44
Pittsburgh.....	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Richmond, Va.....	54.5	75.0	87.5	100.0	100.0	112.5	112.5	112.5	125.0	125.0	137.5	137.5	137.5	44	44	44	44	44	44	44	44	44	44	44	40	40
St. Louis.....	56.3	85.0	100.0	100.0	112.5	125.0	125.0	125.0	125.0	125.0	125.0	125.0	125.0	44	44	44	44	44	44	44	44	44	44	44	44	44
St. Paul.....	56.3	75.0	87.5	100.0	112.5	112.5	125.0	125.0	137.5	137.5	131.3	131.3	131.3	44	44	44	44	44	44	44	44	44	44	44	44	44
Salt Lake City.....	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	125.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	44
San Fran- cisco.....	-----	-----	-----	-----	-----	-----	112.5	112.5	112.5	112.5	112.5	112.5	112.5	-----	-----	-----	-----	-----	-----	44	44	44	44	40	44	44
Scranton.....	50.0	60.0	90.0	100.0	100.0	112.5	125.0	125.0	125.0	125.0	125.0	125.0	125.0	48	44	44	44	44	44	44	44	44	40	44	44	44
Washington.....	54.0	87.5	100.0	100.0	112.5	112.5	-----	-----	-----	-----	-----	-----	-----	44	44	44	44	44	44	44	-----	44	44	44	44	44

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UNION SCALES OF WAGES AND HOURS OF LABOR IN SPECIFIED OCCUPATIONS, 1913 TO 1931, BY CITIES—Continued

Typesetting-machine operators: Book and job

City	Rates per hour (cents)											Hours per week															
	1913	1919	1920	1922	1923	1924	1925	1926	1927	1928	1929	1930	1931	1913	1919	1920	1922	1923	1924	1925	1926	1927	1928	1929	1930	1931	
Atlanta.....	43.8	46.9	57.5	80.0	80.0	80.0	80.0	80.0	100.0	100.0	100.0	100.0	100.0	48	48	48	44	44	44	44	44	44	44	44	44	44	44
Baltimore.....	46.9	60.4	81.3	83.3	90.9	90.9	90.9	90.9	90.9	90.9	90.9	90.9	90.9	48	48	48	48	44	44	44	44	44	44	44	44	44	44
Birmingham.....	52.5	57.3	78.1	80.0	80.0	80.0	85.2	92.5	92.5	92.5	92.5	92.5	92.5	48	48	48	44	44	44	44	44	44	44	44	44	44	44
Boston.....	45.8	59.4	77.1	91.5	91.5	96.5	96.5	96.5	100.0	100.0	100.0	100.0	100.0	48	48	48	44	44	44	44	44	44	44	44	44	44	44
Buffalo.....	50.0	59.4	71.9	95.5	95.5	104.5	109.1	111.4	115.9	115.9	115.9	115.9	115.9	48	48	48	44	44	44	44	44	44	44	44	44	44	44
Charleston, S. C.....	50.0	50.0	50.0	103.4	95.5	88.6	95.5	88.6	88.6	88.6	88.6	88.6	88.6	48	48	48	44	44	44	44	44	44	44	44	44	44	44
Chicago.....	50.0	77.9	98.8	109.2	113.2	119.1	119.1	119.1	125.9	125.9	125.9	132.7	132.7	48	48	48	44	44	44	44	44	44	44	44	44	44	44
Cincinnati.....	49.0	58.3	81.3	104.5	104.5	109.1	109.1	109.1	113.6	113.6	113.6	118.2	118.2	48	48	48	44	44	44	44	44	44	44	44	44	44	44
Cleveland.....	53.8	68.8	87.5	93.8	93.8	100.0	109.1	111.4	113.6	113.6	113.6	115.9	115.9	48	48	48	44	44	44	44	44	44	44	44	44	44	44
Dallas.....	412.5	412.0	415.0	415.0	415.0	415.0	415.0	415.0	415.0	415.0	415.0	415.0	415.0	48	48	48	44	44	44	44	44	44	44	44	44	44	44
Denver.....	54.2	65.6	81.3	95.5	95.5	95.5	102.3	102.3	102.3	102.3	102.3	102.3	102.3	48	48	48	44	44	44	44	44	44	44	44	44	44	44
Detroit.....	55.0	85.0	100.0	100.0	105.0	105.0	105.0	120.0	125.0	125.0	130.0	131.0	131.0	48	48	48	44	44	44	44	44	44	44	44	44	44	44
Fall River.....	50.0	60.4	81.3	92.7	95.5	95.5	98.0	100.0	102.3	104.5	106.8	111.4	111.4	48	48	48	44	44	44	44	44	44	44	44	44	44	44
Indianapolis.....	43.8	58.3	75.0	102.3	81.8	81.8	88.6	98.9	98.9	98.9	98.9	98.9	98.9	48	48	48	44	44	44	44	44	44	44	44	44	44	44
Jacksonville.....	55.2	69.8	78.1	89.6	94.3	97.2	99.4	101.7	104.0	105.1	107.4	107.4	107.4	48	48	48	44	44	44	44	44	44	44	44	44	44	44
Kansas City, Mo.....	50.0	50.0	72.9	70.0	70.0	70.0	85.2	96.6	96.6	92.0	92.0	94.3	94.3	48	48	48	44	44	44	44	44	44	44	44	44	44	44
Little Rock.....	58.3	70.8	81.3	104.5	104.5	110.2	110.2	116.6	116.6	120.5	120.5	120.5	120.5	48	48	48	44	44	44	44	44	44	44	44	44	44	44
Los Angeles.....	49.0	54.2	54.2	79.0	79.0	79.0	79.0	79.0	79.0	79.0	79.0	79.0	79.0	48	48	48	44	44	44	44	44	44	44	44	44	44	44
Louisville.....	35.4	41.7	66.7	79.5	79.5	79.5	79.5	79.5	79.5	79.5	79.5	79.5	79.5	48	48	48	44	44	44	44	44	44	44	44	44	44	44
Manchester.....	47.9	60.4	75.0	95.5	95.5	95.5	95.5	95.5	100.0	102.3	102.3	104.5	106.8	48	48	48	44	44	44	44	44	44	44	44	44	44	44
Milwaukee.....	50.0	61.5	87.5	95.5	95.5	95.5	95.5	95.5	95.5	95.5	95.5	95.5	95.5	48	48	48	44	44	44	44	44	44	44	44	44	44	44
Minneapolis.....	47.9	72.9	91.7	102.3	109.1	115.9	115.9	118.2	120.5	122.7	125.0	127.3	129.5	48	48	48	44	44	44	44	44	44	44	44	44	44	44
Newark, N. J.....	45.8	45.8	58.3	86.4	86.4	86.4	86.4	86.4	86.4	86.4	86.4	86.4	86.4	48	48	48	44	44	44	44	44	44	44	44	44	44	44
New Haven.....	53.3	76.7	76.7	78.4	78.4	78.4	78.4	78.4	78.4	78.4	78.4	78.4	78.4	48	48	48	44	44	44	44	44	44	44	44	44	44	44
New Orleans.....	54.2	75.0	93.8	113.6	113.6	120.5	120.5	122.7	125.0	127.3	129.5	131.8	134.1	48	48	48	44	44	44	44	44	44	44	44	44	44	44
New York.....	50.0	68.8	87.5	93.2	93.2	93.2	93.2	93.2	93.2	93.2	93.2	93.2	93.2	48	48	48	44	44	44	44	44	44	44	44	44	44	44
Omaha.....	43.8	64.6	93.8	94.1	94.1	94.1	94.1	94.1	94.1	94.1	94.1	94.1	94.1	48	48	48	44	44	44	44	44	44	44	44	44	44	44
Philadelphia.....	47.9	68.8	87.5	106.8	106.8	106.8	106.8	106.8	106.8	106.8	106.8	106.8	106.8	48	48	48	44	44	44	44	44	44	44	44	44	44	44
Pittsburgh.....	47.9	68.8	87.5	106.8	106.8	106.8	106.8	106.8	106.8	106.8	106.8	106.8	106.8	48	48	48	44	44	44	44	44	44	44	44	44	44	44
Portland, Oreg.....	65.6	100.0	100.0	110.0	104.5	104.5	111.4	111.4	111.4	114.8	114.8	114.8	114.8	48	48	48	44	44	44	44	44	44	44	44	44	44	44

Typesetting-machine operators, daywork: Newspaper

[illegible][illegible]¹⁷ 44 hours per week for 3 months, between June 1 and Sept. 30.¹⁸ Minimum; maximum, 8 hours per day.

¹⁰ Actual hours worked: minimum, 6; maximum, 8 hours per day.

²¹ Work 47 $\frac{2}{3}$ hours, paid for 48.

²² Maximum; minimum, 7 hours per day.

²⁴ 44 hours per week, June to September, inclusive.

⁴² Machinist operators.

⁴³ Per 1,000 ems nonpareil.

“ Linotype.

⁴⁵ Lindotype.
⁴⁶ Monotype.

⁴⁶ Per 1,000 ems minion.

⁴⁷ For 3,500 ems per hour; for 4,500 ems per hour, 55 cents and 1 cent bonus for each additional 100 ems per hour.

⁴⁸ For 3,500 ems per hour; for 4,500 ems per hour, 70 cents and 1 cent bonus for each additional 100 ems per hour.

⁴⁰ For 4,000 ems per hour; for 4,500 ems per hour, \$1.06 and 1 cent bonus for each additional 100 ems per hour.

onal 100 ems per hour.

⁸⁰ For 4,500 ems per hour; 1 cent bonus for each

UNION SCALES OF WAGES AND HOURS OF LABOR IN SPECIFIED OCCUPATIONS, 1913 TO 1931, BY CITIES—Continued
Typesetting-machine operators, daywork: Newspaper—Continued

City	Rates per hour (cents)												Hours per week													
	1913	1919	1920	1922	1923	1924	1925	1926	1927	1928	1929	1930	1931	1913	1919	1920	1922	1923	1924	1925	1926	1927	1928	1929	1930	1931
Memphis.....	43 9.5	43 9.5	43 12.0	43 12.5	43 12.5	43 12.5	43 12.5	43 12.5	43 12.5	43 12.5	43 12.5	43 12.5	43 12.5	43 12.5	43 12.5	43 12.5	43 12.5	43 12.5	43 12.5	43 12.5	43 12.5	43 12.5	43 12.5	43 12.5	43 12.5	43 12.5
Milwaukee...	43 8	43 56.3	77.1	93.8	93.8	97.9	102.5	102.5	106.3	106.3	110.4	117.8	117.8	48 48	48 48	48 48	48 48	48 48	48 48	48 48	48 48	48 48	48 48	48 48	48 48	48 48
Minneapolis...	43 10.0	43 11.0	43 11.0	43 12.5	43 12.5	43 12.5	43 12.5	43 12.0	43 12.0	43 12.0	43 12.4	43 121.4	43 121.4	43 121.4	48 48	48 48	48 36	48 36	48 36	48 36	48 36	48 36	48 42	48 42	48 42	48 42
Newark, N.J...	60.9	76.1	89.1	110.9	110.9	110.9	119.6	121.7	130.4	132.6	134.8	134.8	134.8	46 46	46 46	46 46	46 46	46 46	46 46	46 46	46 46	46 46	46 46	46 46	46 46	46 46
New Haven...	46.9	50.0	72.9	79.2	79.2	85.4	85.4	87.5	89.6	89.6	91.7	93.8	93.8	48 48	48 48	48 48	48 48	48 48	48 48	48 48	48 48	48 48	48 48	48 48	48 48	48 48
New York...	66.7	96.7	122.2	122.2	122.2	128.9	133.3	133.3	140.0	142.2	144.4	144.4	144.4	45 45	45 45	45 45	45 45	45 45	45 45	45 45	45 45	45 45	45 45	45 45	45 45	45 45
Omaha...	50.0	68.8	87.5	87.5	87.5	90.6	90.6	90.6	96.9	97.9	99.0	100.0	100.0	48 48	48 48	48 48	48 48	48 48	48 48	48 48	48 48	48 48	48 48	48 48	48 48	48 48
Philadelphia...	45.8	66.7	81.3	79.2	79.2	87.5	87.5	87.5	91.3	91.3	91.3	91.3	91.3	48 48	48 48	48 48	48 48	48 48	48 48	48 48	48 48	48 48	48 48	48 48	48 48	48 48
Pittsburgh...	55.0	77.0	87.5	111.8	118.9	121.1	121.1	125.6	126.7	126.7	126.7	128.9	128.9	48 48	48 48	48 48	48 48	48 48	48 48	48 48	48 48	48 48	48 48	48 48	48 48	48 48
Portland, Ore.....	68.3	100.0	106.7	106.7	106.7	106.7	106.7	106.7	106.7	106.7	113.3	113.3	113.3	45 45	45 45	45 45	45 45	45 45	45 45	45 45	45 45	45 45	45 45	45 45	45 45	45 45
Providence...	47.9	66.7	87.5	95.8	95.8	104.2	111.1	104.2	108.3	108.3	108.3	112.5	116.7	48 48	48 48	48 48	48 48	48 48	48 48	48 48	48 48	48 48	48 48	48 48	48 48	48 48
Richmond, Va.....	41.7	56.3	56.3	87.5	87.5	87.5	87.5	94.8	94.8	94.8	94.8	94.8	94.8	48 48	48 48	48 48	48 48	48 48	48 48	48 48	48 48	48 48	48 48	48 48	48 48	48 48
St. Louis.....	41.0	61.5	61.5	89.8	89.8	93.8	101.3	101.3	101.3	101.3	101.3	101.3	101.3	48 48	48 48	48 48	48 48	48 48	48 48	48 48	48 48	48 48	48 48	48 48	48 48	48 48
St. Paul.....	44.5	63.0	94.0	89.8	89.8	93.8	101.3	101.3	101.3	101.3	101.3	101.3	101.3	48 48	48 48	48 48	48 48	48 48	48 48	48 48	48 48	48 48	48 48	48 48	48 48	48 48
Salt Lake City.....	41.0	61.0	61.0	83.5	83.5	83.5	83.5	83.5	83.5	83.5	83.5	83.5	83.5	48 48	48 48	48 48	48 48	48 48	48 48	48 48	48 48	48 48	48 48	48 48	48 48	48 48
San Francisco...	64.4	75.6	93.8	107.8	107.8	107.8	115.6	115.6	115.6	115.6	120.0	120.0	120.0	45 45	45 45	45 45	45 45	45 45	45 45	45 45	45 45	45 45	45 45	45 45	45 45	45 45
Scranton.....	47.9	60.4	81.3	87.5	87.5	95.8	104.2	110.4	112.5	114.9	114.9	114.9	114.9	48 48	48 48	48 48	48 48	48 48	48 48	48 48	48 48	48 48	48 48	48 48	48 48	48 48
Seattle.....	75.0	100.0	114.3	114.3	114.3	121.4	121.4	121.4	123.2	123.2	123.2	123.2	123.2	42 42	42 42	42 42	42 42	42 42	42 42	42 42	42 42	42 42	42 42	42 42	42 42	42 42
Washington...	60.7	92.9	104.0	104.0	104.0	110.0	110.0	110.0	115.6	115.6	115.6	115.6	115.6	42 42	42 42	42 42	42 42	42 42	42 42	42 42	42 42	42 42	42 42	42 42	42 42	42 42

¹⁸ Minimum, maximum, 3 hours per day.

¹⁹ Maximum, minimum, 7 hours per day.

²⁰ Per 1,000 ems nonparel.

²¹ Minimum, maximum, 7½ hours per day.

²² Maximum; minimum, 7½ hours per day.

²³ Per 1,000 ems nonparel and \$1 per day bonus.

²⁴ Maximum; minimum, 6½ hours per day.

²⁵ Maximum; minimum, 40½ hours per week.

Recent Changes in Wages and Hours of Labor

INFORMATION received by the bureau regarding wage changes is presented below in two distinct groups: Part 1 relates to manufacturing establishments that report monthly figures regarding volume of employment, while part 2 presents data obtained from new trade agreements and other miscellaneous sources. Although the effort is made, it is not always possible to avoid duplication of data as between parts 1 and 2.

Part 1. Wage-Rate Changes in Manufacturing Industries

FIVE establishments in four industries reported wage-rate increases during the month ending July 15. These increases averaged 8.1 per cent and affected 365 employees, or 22 per cent of the employees in the establishments concerned.

Two hundred and thirty-eight establishments in 46 industries reported wage-rate decreases during the same period. These decreases, averaging 9.7 per cent, affected 33,238 employees, or 69 per cent of all employees in the establishments concerned. Twenty-two of these wage-rate decreases were reported in the food group, 43 were in the textile group, 27 in the iron and steel group, and 46 in the lumber group. Seventeen establishments in the boot and shoe industry reported decreases in wage rates over the monthly period averaging 6.9 per cent and affecting 4,090 employees. The brick, tile, and terra cotta industry also reported 17 wage-rate decreases averaging 11.5 per cent and affecting 697 employees.

WAGE CHANGES OCCURRING BETWEEN JUNE 15 AND JULY 15, 1931

Industry	Establishments		Per cent of increase or decrease in wage rate		Employees affected		
	Total number reporting	Number reporting increase or decrease in wage rates	Range	Average	Total number	Percent of employees	
						In establishments reporting increase or decrease in wage rates	In all establishments reporting
			Increases				
Boots and shoes.....	271	1	10.0	10.0	141	100	(1)
Paper boxes.....	302	1	10.0	10.0	16	9	(1)
Printing, book and job.....	592	2	9.7-10.0	9.8	55	12	(1)
Automobiles.....	209	1	5.5	5.5	153	17	(1)
Total.....		5	5.5-10.0	8.1	365	22	-----
			Decreases				
Slaughtering and meat packing.....	202	5	5.0-10.0	8.0	372	18	(1)
Confectionery.....	318	7	10.0-25.0	10.5	350	89	1
Ice cream.....	315	1	5.0- 6.0	5.5	11	69	(1)
Flour.....	380	2	10.0	10.0	125	100	1
Baking.....	698	7	5.0-20.0	7.4	452	26	1
Cotton goods.....	492	15	10.0-15.0	10.5	4,817	53	3
Hosiery and knit goods.....	340	7	7.0-10.0	8.7	2,120	96	3
Silk goods.....	249	2	10.0	10.0	220	70	1
Woolen and worsted goods.....	196	6	6.0-22.6	10.3	769	31	1

¹ Less than one-half of 1 per cent.

WAGE CHANGES OCCURRING BETWEEN JUNE 15 AND JULY 15, 1931—Continued

Industry	Establishments		Per cent of increase or decrease in wage rate		Employees affected		
	Total number reporting	Number reporting increase or decrease in wage	Range	Average	Total number	Per cent of employees	
						In establishments reporting increase or decrease in wage rates	In all establishments reporting
			Decreases				Y
Dyeing and finishing textiles...	127	3	7.0-10.0	10.0	1,277	92	4
Clothing, men's.....	324	4	5.0-20.0	11.6	173	60	(1)
Shirts and collars.....	110	1	10.0	10.0	25	100	(1)
Clothing, women's.....	380	3	10.0	10.0	240	92	1
Millinery and lace goods.....	125	2	10.0-15.0	11.3	332	59	3
Iron and steel.....	191	4	4.5-15.0	9.5	687	51	(1)
Cast iron pipe.....	42	1	10.0	10.0	515	100	6
Structural-iron work.....	166	2	9.2-10.0	9.2	102	100	(1)
Foundry and machine-shop products.....	1,046	15	4.5-10.0	9.5	1,140	67	1
Machine tools.....	148	2	10.0	10.0	11	23	(1)
Steam fittings and steam and hot-water heating apparatus.....	104	1	10.0	10.0	224	100	1
Stoves.....	130	2	10.0-15.0	12.1	428	100	3
Lumber, sawmills.....	633	25	8.0-25.0	11.5	3,782	97	5
Lumber, millwork.....	321	11	10.0-11.1	10.2	625	93	3
Furniture.....	442	10	5.0-12.0	9.7	888	86	2
Boots and shoes.....	271	17	5.0-25.0	6.9	4,060	72	4
Paper and pulp.....	367	9	5.0-10.0	8.9	1,083	100	1
Paper boxes.....	302	3	10.0-20.0	18.3	77	68	(1)
Printing, book and job.....	592	8	10.0-25.0	10.5	130	38	(1)
Printing, newspapers.....	431	6	5.0-15.0	10.0	677	52	1
Chemicals.....	159	1	5.0	5.0	363	100	1
Fertilizers.....	205	8	8.0-20.0	12.4	531	95	9
Cement.....	107	2	10.0	10.0	222	100	1
Brick, tile, and terra cotta.....	703	17	7.5-25.0	11.5	697	91	2
Pottery.....	113	7	10.0-20.0	10.2	2,683	100	17
Stamped and enameled ware.....	80	3	10.0	10.0	702	82	4
Brass, bronze, and copper products.....	160	2	10.0	10.0	677	100	2
Cigars and cigarettes.....	182	1	21.0	21.0	26	100	(1)
Agricultural implements.....	77	3	10.0	10.0	252	41	3
Electrical machinery, apparatus, and supplies.....	213	3	4.0-6.0	5.2	607	54	(1)
Pianos and organs.....	59	1	18.0	18.0	7	18	(1)
Shipbuilding.....	89	2	7.5-10.0	7.8	117	100	(1)
Jewelry.....	151	1	10.0	10.0	8	100	(1)
Paint and varnish.....	292	3	11.5-15.0	14.4	97	69	1
Rubber goods, other than boots, shoes, tires and inner tubes.....	81	1	10.0	10.0	177	100	1
Cash registers, adding machines, and calculating machines.....	46	1	10.0	10.0	5	50	(1)
Typewriters and supplies.....	16	1	10.0	10.0	325	100	3
Total.....		238	4.0-25.0	9.7	33,238	69	

¹ Less than one-half of 1 per cent.

Part 2. Wage Changes Reported by Trade-Unions since May, 1931

UNION, and in a few instances municipal and other, wage and hour changes received during the past month and covering the months of May to August were reported to the bureau for 21,070 workers, 8,117 of whom adopted the 5-day week indefinitely and 7,245 temporarily.

Practically all changes in wages were reductions. In the building trades these reductions ranged from 5 to 37½ cents per hour; street

railways, from 2 to 7 cents per hour; municipal employees, from \$20 to \$30 per month; and longshoremen, 10 cents per hour. Pocketbook workers, a few printing trades, and in two localities miners reported increases. Details may be had from the table following:

RECENT WAGE CHANGES, BY INDUSTRY, OCCUPATION, AND LOCALITY, MAY TO AUGUST, 1931

Industry or occupation, and locality	Date of change	Rate of wages		Hours per week	
		Before change	After change	Before change	After change
Airplane pilots, Eastern United States.....	May 1	<i>Per month</i> \$170.00-\$238.00	<i>Per month</i> \$125.00-\$200.00	(³)	(³)
Bakers, Chicago, Ill.....	do	<i>Per week</i> 54.00-63.00	<i>Per week</i> 48.00-56.00	48	48
Building trades:					
Bricklayers and masons, Chicago, Ill., and vicinity.....	Aug. 1	<i>Per hour</i> 1.70	<i>Per hour</i> (³)	44	40
Carpenters—					
Birmingham, Ala.....	June 1	1.10	.85	40	40
Racine, Wis., and vicinity.....	May 1	1.17½	1.17½	44	40
Engineers, Beaumont, Galveston, Houston, and Port Arthur, Tex.....	May 18	1.25	1.12½	44	44
Laborers—					
Denver, Colo.....	May 1	.62½	.50	48	44
Toledo, Ohio.....	May 11	.40	.50	44	40
Painters—					
Dayton, Ohio.....	May 5	1.25	1.25	44	40
Wilmington, Del.....	July 15	1.00	.95	40	40
Plasterers, Washington, Pa.....	May 1	1.62½	1.25	40	40
Plumbers and steamfitters—					
Kenosha, Wis.....	May 14	1.37½	1.18¾	40	40
Racine, Wis.....	May 29	1.37½	1.25	40	40
Syracuse, N. Y.....	July 11	1.50	1.50	44	40
Utica, N. Y.....	May 1	1.25	1.37½	44	40
Structural-iron workers—					
Dayton, Ohio.....	May 26	(³)	(³)	44	40
Pittsburgh, Pa., and vicinity.....	June 29	1.50	1.50	44	40
Clerks, Lansford and Philadelphia, Pa.....	July 1	(³)	(³)	44	40
Glass molders, Winchester, Ind.....	May 20	.63-1.00	.63-1.00	48	44
Leather, pocketbook workers, Philadelphia, Pa.....	June 20	<i>Per week</i> 8.00-30.00	<i>Per week</i> 10.00-35.00	49	44
Longshoremen:					
Duluth, Minn.....	May 5	<i>Per hour</i> 0.70	<i>Per hour</i> 0.60	(³)	(³)
Superior, Wis.....	do	.70	.60	(³)	(³)
Miners:					
Coal miners—					
Dillonvale, Ohio.....	May 14	4.00	3.50	(³)	(³)
Morgantown, W. Va.....	May 29	5.25	5.30	48	48
Osage, W. Va.....	do	5.27	5.30	48	48
Whitwell, Tenn.....	June 24	5.50	5.45	54	54
Mine, mill, and smelter workers, Burke, Kellogg, Mullan, and Wallace, Idaho—					
Miners.....	May 16	5.00	4.75	55	55
Muckers.....	do	4.50	4.25	55	55
Motion picture operators:					
Houston, Tex.....	May 1	<i>Per week</i> 50.00-82.50	<i>Per week</i> 42.50-71.50	45½	39
Rochester, N. Y.—					
Neighborhood theaters.....	June 1	25.00-57.00	(⁷)	40	40
Other theaters.....	do	60.00-93.50	(⁸)	40	40
Spokane, Wash.....	June 20	64.29	50.00	36	36
Printing and publishing:					
Compositors—					
Charleston, Ill.—					
Job work.....	May 31	30.00	35.00	44	44
Newspaper.....	do	30.00	35.00	44	44
St. Joseph, Mo.—					
Newspaper, day.....	Aug. 9	45.50	46.00	48	48
Newspaper, night.....	do	48.50	49.00	48	48
Photo-engravers—					
Milwaukee, Wis.....	June 1	56.00	50.80	44	40
Racine, Wis.....	do	56.00	50.80	44	40

¹ Plus 5 cents per mile, day flying; 10 cents per mile, night flying.

⁵ Per ton.

² Plus 4½ cents per mile, day flying; 7½ cents per mile, night flying.

⁶ Days per week.

³ Not reported.

⁷ 12½ per cent reduction for temporary period.

⁴ 8 per cent reduction.

⁸ 7½ per cent reduction for temporary period.

RECENT WAGE CHANGES, BY INDUSTRY, OCCUPATION, AND LOCALITY, MAY TO AUGUST, 1931—Continued

Industry or occupation, and locality	Date of change	Rate of wages		Hours per week	
		Before change	After change	Before change	After change
Street railway workers:					
Pittsfield, Mass., barnmen, bus and trolley operators, trackmen	do	Per week ⁽²⁾	Per week ⁽⁹⁾	10 9	10 8
Portland, Oreg.—					
Trainmen—					
First 3 months in platform service	May 1	Per hour ¹¹ \$0.60	Per hour ¹² \$0.55	48	48
Next 9 months in platform service	do	11.62	12.57	48	48
Thereafter	do	11.65	12.60	48	48
Extra men	do	Per month 120.00	Per month 111.00	48	48
Clerks	do	165.00	153.00	48	48
Blacksmith shop	do	Per hour 0.64-0.84	Per hour 0.59-0.77	48	48
Paint shop	do	.57- .77	.53- .71	48	48
Carpenter shop	do	.64- .88	.59- .81	48	48
Truck shop	do	.69- .75	.64- .69	48	48
Wire shop	do	.64- .77	.59- .71	48	48
Air room	do	.62- .74	.57½- .68	48	48
Armature room	do	.65- .83	.60- .76	48	48
Delivery and labor	do	.52- .69	.50- .64	48	48
Car houses	do	.52- .72	.50- .63	48	48
Garages	do	.52- .83	.50- .76	48	48
Rip track	do	.52- .84	.50- .77	48	48
Bridge and building men	do	.52- .72	.50- .66	48	48
Track force	do	.52- .84	.50- .77	48	48
Agents, clerks, etc	do	Per month 88.50-206.70	Per month 82.00-190.00	48	48
Municipal workers:					
Chicago, Ill., city employees	July 12	(3)	(3)	48	13 40
Houston, Tex., street and bridge department employees	(3)	(3)	(3)	48	40
San Joaquin, Calif., laborers	(3)	Per day 4.00-4.50	Per day 5.00	48	48
Zeigler, Ill.—					
Bookkeepers	May 4	Per month 100.00	Per month 75.00	48	48
Clerks	do	100.00	75.00	48	48
Chiefs of police	do	200.00	170.00	48	48
Fire chiefs	do	150.00	130.00	48	48
Night police	do	180.00	150.00	48	48
Textiles: Silk workers, Fall River, Mass.	May 23	Per week 33.00	Per week 29.00	56	56

² Not reported⁹ No change.¹⁰ Hours per day.¹¹ 1-man car operators and bus operators receive 7 cents per hour more.¹² 1-man car operators and bus operators receive 6 cents per hour more.¹³ Temporary change.

Farm Wage and Labor Situation on July 1, 1931

FARM wages continued to decline during the quarter ending July 1, reaching the lowest level recorded since 1916, according to the United States Department of Agriculture, which discusses the farm wage and labor situation as follows in the July, 1931, issue of Crops and Markets:

Continued nonseasonal declines since April 1 brought farm wages down to the lowest level recorded in the past 15 years. On July 1 the department's farm wage index was only 123 per cent of the pre-war level, as compared with 127 per cent three months earlier, 160 per cent a year ago, and an index of 112 per cent back in 1916.

The decline in wages paid hired farm workers during the last three months is especially significant in view of the fact that farm wages usually advance from

April to July 1. For the five years 1926-1930 the advance during this period averaged 4.6 points. The farm wage decline of 4 points, or 3 per cent, between April 1 and July 1, 1931, was accompanied by a 12 per cent decline in the general level of farm prices, which materially curtailed the income from current sales of agricultural commodities and forced farmers to do as much of their own harvesting as possible.

On July 1 all types of farm wage payments were substantially below a year ago. Wages per day, with board, suffered the most drastic reductions, averaging 25 per cent down for the country as a whole, 27 per cent for the Central States, 25 per cent in the far West, 24 per cent in the South Atlantic group, and 19 per cent in the North Atlantic division.

These reductions were the result of a plentiful supply of workers and a much lower demand for farm help. Crop correspondents reported a supply of farm workers 111.1 per cent of normal on July 1, compared with 99 per cent of normal a year ago. On the other hand, the demand for farm labor was reported at 73.4 per cent of normal on the first of this month, compared with 84.8 per cent on July 1, 1930. Supply, expressed as a percentage of demand, was 151.3 per cent of normal, compared with 127 per cent a year ago.

Table 1, taken from Crops and Markets for July, 1931, gives farm wage rates and index numbers, by years, from 1910 to 1930, and by quarters, 1929 to July, 1931.

TABLE 1.—FARM WAGE RATES AND INDEX NUMBERS, 1910 TO 1931

Year	Average yearly farm wage ¹				Weighted average wage rate per month ²	Index numbers of farm wages (1910-1914=100)
	Per month		Per day			
	With board	Without board	With board	Without board		
1910.....	\$19.58	\$28.04	\$1.07	\$1.40	\$23.08	97
1911.....	19.85	28.33	1.07	1.40	23.25	97
1912.....	20.46	29.14	1.12	1.44	24.01	101
1913.....	21.27	30.21	1.15	1.48	24.83	104
1914.....	20.90	29.72	1.11	1.44	24.26	101
1915.....	21.08	29.97	1.12	1.45	24.46	102
1916.....	23.04	32.58	1.24	1.60	26.83	112
1917.....	28.64	40.19	1.56	2.00	33.42	140
1918.....	35.12	49.13	2.05	2.61	42.12	176
1919.....	40.14	56.77	2.44	3.10	49.11	206
1920.....	47.24	65.05	2.84	3.56	57.01	239
1921.....	30.25	43.58	1.66	2.17	35.77	150
1922.....	29.31	42.09	1.64	2.14	34.91	146
1923.....	33.09	46.74	1.91	2.45	39.64	166
1924.....	33.34	47.22	1.88	2.44	39.67	166
1925.....	33.88	47.80	1.89	2.46	40.12	168
1926.....	34.86	48.86	1.91	2.48	40.88	171
1927.....	34.58	48.63	1.90	2.46	40.60	170
1928.....	34.66	48.65	1.88	2.43	40.44	169
1929.....	34.74	49.08	1.88	2.42	40.52	170
1930.....	31.14	44.59	1.65	2.16	36.24	152
1929-January.....	33.04	47.24	1.78	2.34	38.75	162
April.....	34.68	49.00	1.79	2.34	39.80	167
July.....	36.08	50.53	1.89	2.43	41.42	173
October.....	35.90	50.00	1.92	2.46	41.49	174
1930-January.....	32.29	46.80	1.73	2.27	37.88	159
April.....	33.83	47.81	1.72	2.27	38.66	162
July.....	33.47	47.24	1.72	2.23	38.26	160
October.....	31.23	44.28	1.61	2.12	35.90	150
1931-January.....	26.03	39.04	1.38	1.87	30.86	129
April.....	25.99	38.37	1.33	1.80	30.25	127
July.....	25.35	37.00	1.29	1.73	29.30	123

¹ Yearly averages are from reports by crop reporters, giving average wages for the year in their localities, except for 1924-1930, when the wage rates per month are a straight average of quarterly rates, April, July, October of the current year, and January of the following year and the wage rates per day are a weighted average of quarterly rates. April (weight 1), July (weight 5), October (weight 5), January of the following year (weight 1).

² This column has significance only as an essential step in computing the wage index.

Wage rates on July 1, 1931, per month and per day, with board and without board, together with figures on farm labor supply and demand, are shown by States and geographic divisions in Table 2, reproduced from a press release of the United States Department of Agriculture.

TABLE 2.—FARM WAGE RATES AND FARM LABOR SUPPLY AND DEMAND, JULY 1, 1931

State and division	Wage rates				Farm labor supply and demand		
	Per month, with board	Per month, without board	Per day, with board	Per day, without board	Supply, per cent of normal	Demand, per cent of normal	Supply, per cent of demand
Maine.....	\$39.75	\$57.50	\$2.10	\$2.80	108	80	135
New Hampshire.....	38.75	61.50	2.20	2.90	114	81	141
Vermont.....	34.75	53.25	1.80	2.60	115	83	139
Massachusetts.....	44.50	73.25	2.40	3.45	112	83	135
Rhode Island.....	44.00	75.00	2.40	3.25	109	85	128
Connecticut.....	39.75	65.25	2.45	3.20	112	82	137
New York.....	37.00	55.00	2.25	2.95	107	79	135
New Jersey.....	38.00	59.50	2.00	2.80	114	92	124
Pennsylvania.....	30.50	47.00	1.80	2.45	115	77	149
North Atlantic.....	36.13	55.47	2.09	2.82	111.2	80.4	138.3
Ohio.....	26.75	40.50	1.55	2.05	114	72	158
Indiana.....	27.75	37.50	1.45	1.95	122	77	158
Illinois.....	32.00	43.00	1.60	2.10	111	79	141
Michigan.....	26.00	39.00	1.45	2.00	120	72	167
Wisconsin.....	31.00	45.00	1.50	2.15	115	79	146
East North Central.....	29.05	41.30	1.52	2.06	115.7	76.1	152.0
Minnesota.....	31.75	44.00	1.60	2.25	111	71	156
Iowa.....	36.25	46.00	1.75	2.30	111	81	137
Missouri.....	27.00	36.25	1.30	1.65	107	74	145
North Dakota.....	27.25	38.75	1.20	1.85	112	59	190
South Dakota.....	32.50	46.00	1.55	2.15	112	68	165
Nebraska.....	33.00	45.75	1.70	2.25	114	77	148
Kansas.....	28.50	40.50	1.65	2.25	116	71	163
West North Central.....	31.02	42.14	1.54	2.09	111.1	73.2	151.8
North Central.....	30.05	41.73	1.53	2.07	113.4	74.6	151.9
Delaware.....	29.75	42.25	1.70	2.10	107	84	127
Maryland.....	29.50	43.00	1.50	2.00	108	84	129
Virginia.....	23.50	33.75	1.20	1.60	108	81	133
West Virginia.....	25.00	38.25	1.20	1.65	106	68	156
North Carolina.....	17.25	25.50	.90	1.15	105	73	144
South Carolina.....	12.50	18.25	.60	.80	103	74	139
Georgia.....	12.50	18.75	.70	.90	103	72	143
Florida.....	17.50	30.75	.90	1.35	113	75	151
South Atlantic.....	17.58	26.17	.91	1.20	105.4	74.9	140.7
Kentucky.....	21.75	30.50	1.05	1.40	102	72	142
Tennessee.....	18.25	26.00	.90	1.15	112	75	149
Alabama.....	13.00	18.00	.65	.85	112	70	160
Mississippi.....	14.25	21.50	.70	.95	102	73	140
Arkansas.....	17.50	26.50	.80	1.05	106	65	163
Louisiana.....	16.00	25.00	.80	1.05	111	78	142
Oklahoma.....	20.50	29.50	1.05	1.35	113	62	182
Texas.....	20.00	29.00	1.00	1.30	113	64	177
South Central.....	17.88	25.99	.88	1.15	109.4	69.2	158.1
Montana.....	36.50	51.00	1.65	2.35	126	55	229
Idaho.....	39.75	59.00	1.95	2.40	127	70	181
Wyoming.....	39.50	55.00	2.00	2.75	119	75	159
Colorado.....	32.50	51.25	1.60	2.25	120	73	164
New Mexico.....	29.50	41.50	1.25	1.50	115	75	153
Arizona.....	38.00	56.25	1.60	2.15	122	74	165
Utah.....	48.50	68.00	2.15	2.80	126	70	180
Nevada.....	47.00	74.00	1.80	2.55	131	76	172
Washington.....	33.00	55.25	1.85	2.60	129	67	193
Oregon.....	35.00	56.00	1.75	2.35	122	70	174
California.....	47.00	74.00	1.95	2.80	117	79	148
Western.....	40.17	61.84	1.81	2.50	120.9	73.2	165.2
United States.....	25.35	37.00	1.29	1.73	111.1	73.4	151.3

Wage Determination in the Coal Industry

IN A report entitled "Principles and Methods of Wage Determination in the Coal-Mining Industry," the International Labor Office presents¹ the results of an international survey dealing with the subject of wage determination in the coal industry. The main object of the report is stated to be to facilitate the orderly consideration of the possible forms of international action relative to the determination of wage questions in coal mines, and the principles applied to the question of wage setting in a number of countries are discussed.

Difficulties Involved

THE difficulties encountered in fixing coal miners' wages are classified as (1) those arising in connection with collective bargaining, (2) those connected with the principles of wage determination, i. e., the means adopted for securing to coal miners an equitable share in the proceeds of the industry and preventing wages from falling to unduly low levels, and (3) those concerning the methods of wage payment, including the additions and deductions to which these payments are subject.

Attention is directed to the fact that peculiar circumstances have made the question of wage determination in the coal industry a matter of special importance. It is stated that wages constitute an unusually high proportion of the total cost of producing coal (as much as 70 per cent of the cost in some localities), that the amount of fixed capital invested in coal mining is small compared with the value of annual output and accordingly a slight change in the value of output either up or down represents a large change in the return on capital invested, and that the price of coal is subject to wider fluctuations than wholesale prices in general.

Owing to the fact that increases in the price of coal are so quickly reflected in the profits of the producer and decreases may cause great losses, it is of special importance that there be some equitable basis for determining wages in this industry.

A fact further complicating wage relations in the coal industry is that the long-time trend is toward stationary per capita productivity. This situation, the author of the report states, must lead to one of two results: Either the price of coal must be kept above prices of other commodities in the manufacture of which productivity is increasing, in order that miners' wages may be kept at a fair level, or the miners' standard of living must be reduced. Whichever the choice, the coal miners stand to lose, for in the one case many will lose their jobs, since substitutes for coal will be used increasingly if the price of coal is high, and in the other case, as has been stated, the miners must content themselves with a lower standard of living.

Principles Advanced and Applied

THE principal basis suggested for the determination of coal miners' wages is that workers should receive an equitable share of the proceeds of operation and that their wages should be subject to change according as the economic position of the industry changes; it is, however,

¹ Studies and Reports, Series D (wages and hours of work), No. 20, Geneva, 1931.

recognized that wages must not be forced to unduly low levels. Other propositions advanced are that wages should be adjusted according to changes in the selling price of coal or in the cost of living, that there should be the same pay for the same work, that wages should be adjusted to take inferior working conditions into account in some measure, that wages in mines should not fall below those paid in occupations where equivalent skill, effort, and risk are involved, that wage changes in one locality should justify corresponding changes elsewhere, and that wages should be set according to the respective bargaining power of the two parties.

Great Britain.—The report states that Great Britain has gone farther than any other country in developing principles of wage determination. In that country, wages are made up of a basic wage plus a percentage, the amount of the percentage being determined according to the economic position of the industry. In the last quarter of the nineteenth century the percentages were fixed in the various districts by reference to the selling price of some standard quality of coal. Dissatisfaction with this method led to the setting up of conciliation boards to fix the amount to be paid. Such boards took into account the facts, such as prices, but were not formally bound to fix percentages to be paid on the basis of any one set of facts. Moreover, if the boards could not agree, the impartial chairman could make the final decision. In 1921 a new method was adopted for fixing wages. This method is still in force, with some modifications, and provides that wages shall make up a definite proportion of the net proceeds of the industry, varying by districts from 85 to 87 per cent. Thus, by determining the net proceeds in a given district for a given period of time, it may be calculated by how much the basic wage shall be supplemented in order to give the workers the amount of wages to which they are entitled. Further provision was made that wages should never be allowed to fall below a certain figure, and that if the wage rate was not sufficient to furnish subsistence to certain low-paid day workers an extra allowance per shift should be made.

Belgium.—In Belgium a national agreement was reached in 1920 whereby wage adjustments were authorized according to fluctuations in the official cost-of-living index. Until 1926 wage changes were made on this principle. In October, 1926, the basis was changed to take into account economic conditions as well as cost of living. The new index is made up of the cost-of-living index, with a weight of three-quarters, and the price of a given grade of bituminous coal, with a weight of one-quarter.

Other countries.—No automatic or semiautomatic system of wage setting has been adopted in other countries. However, examples are cited showing that in most wage negotiations in other countries the economic position of the industry and changes in the cost of living are taken into consideration. For example, it is stated that in France fluctuations in cost of living are taken into consideration in setting rates. This is equally true in Germany and in the latter country equitable adjustment of rates is further facilitated owing to the fact that wage settlements are usually arrived at by decisions of an arbitration board. Another interesting method of wage fixing is that in force in South Africa, where the rates of pay of coal-mine workers are generally based on the minimum rates laid down for gold miners.

Wages and Hours of Labor in Greater Shanghai, 1929

A STUDY of wages and hours of labor in Greater Shanghai in 1929 made by the Shanghai Bureau of Social Affairs shows that the woman wage earners in cotton spinning constituted the largest single group of industrial workers. On September 25, 1929, the average working hours of these women were approximately 12 hours per day, for which they received about 45 cents (United States currency, 18.9 cents).¹ Their average monthly earnings in 1929 were approximately \$12.50 (United States currency, \$5.24).

It is reported that 67 per cent of the total number of laborers in Shanghai are paid less than 10 cents (United States currency, 4.2 cents) per hour.

Of the 2,326 factories in Greater Shanghai employing 285,700 workers (84,786 men, 173,432 women, and 27,482 children), 274 factories employing 97,042 workers (31,053 men, 58,473 women, and 7,516 children) are covered by the investigation under review. The average hourly and daily rates for September 25, 1929, given in Table 1, and average monthly earnings for 1929, given in Table 2, are taken from the report of this survey.

Earnings are defined by the investigators as "the regular wages plus, if any, rice allowance, allowance for board and lodging, reward, or bonus, deducting for absences and for work rejected upon inspection." The tabulations do not include the office staff and technicians, but only those actually engaged in manufacturing work.

TABLE 1.—AVERAGE HOURLY AND DAILY WAGE RATES AND NUMBER OF HOURS WORKED PER DAY IN VARIOUS INDUSTRIES IN GREATER SHANGHAI, SEPTEMBER 25, 1929

[Conversions into United States currency on basis of exchange rate of yuan dollar, September, 1929=40.1 cents]

Industry	Type of worker	Number of workers investigated	Average wage rates per hour		Average number of hours worked per day	Average wage rates per day	
			Chinese currency	United States currency		Chinese currency	United States currency
			<i>Cents</i>	<i>Cents</i>			<i>Cents</i>
Woodworking: Sawing.....	Males.....	1,183	6.9	2.8	9	\$0.621	24.9
Metallurgy: Foundry.....	do.....	540	8.6	3.4	9	.774	31.0
Machinery, etc.: Machinery.....	do.....	2,958	8.7	3.5	9	.783	31.4
Construction of boats, etc.: Shipbuilding.....	do.....	2,040	11.3	4.5	9	1.017	40.8
Manufacture of bricks, etc.: Glass making.....	do.....	466	8.4	3.4	8	.672	26.9
	Children.....	499	4.0	1.6	8	.320	12.8
Manufacture of chemicals, etc.:							
Soap making.....	Males.....	568	5.9	2.4	9½	.543	21.8
	Females.....	241	3.5	1.4	9½	.322	12.9
Match making.....	Males.....	559	8.6	3.4	9½	.803	32.2
	Females.....	818	2.7	1.1	8½	.240	9.6
	Children.....	342	2.5	1.0	8½	.203	8.1
Enameling.....	Males.....	1,007	5.9	2.4	9½	.555	22.3
	Females.....	186	4.7	1.9	9	.423	17.0
	Children.....	59	3.6	1.4	9	.324	13.0
Textiles:							
Silk reeling.....	Males.....	518	6.1	2.4	12	.732	29.4
	Females.....	14,643	4.9	2.0	11	.539	21.6
	Children.....	4,873	3.0	1.2	11	.330	13.2
Cotton spinning.....	Males.....	7,558	4.7	1.9	11¾	.552	22.1
	Females.....	27,574	3.8	1.5	11¾	.452	18.1
	Children.....	1,161	2.5	1.0	12	.300	12.0
Silk weaving.....	Males.....	1,002	12.0	4.8	10½	1.200	50.5
	Females.....	566	8.6	3.4	10¾	.694	35.8

¹ Conversions into United States currency on basis of Chinese cent=0.42 cent.

TABLE 1.—AVERAGE HOURLY AND DAILY WAGE RATES AND NUMBER OF HOURS WORKED PER DAY IN VARIOUS INDUSTRIES IN GREATER SHANGHAI, SEPTEMBER, 25, 1929—Continued

Industry	Type of worker	Number of workers investigated	Average wage rates per hour		Average number of hours worked per day	Average wage rates per day	
			Chinese currency	United States currency		Chinese currency	United States currency
Textiles—Continued.							
Cotton weaving	Males	2,558	<i>Cents</i> 6.5	<i>Cents</i> 2.6	11½	\$0.722	<i>Cents</i> 29.0
	Females	7,128	4.7	1.9	11¾	.545	21.9
	Children	394	3.1	1.2	11½	.357	14.3
Silk and cotton knitting	Males	572	8.1	3.2	10½	.818	32.8
	Females	1,594	6.6	2.6	9¾	.634	25.4
Bleaching and dyeing	Males	1,443	6.0	2.4	7¾	.468	18.8
Manufacture of leather, etc.: Tanning	do.	592	6.9	2.8	9	.621	24.9
Manufacture of food, etc.:							
Flour	do.	1,521	5.1	2.0	11	.561	22.5
Oils and their by-products	do.	1,421	6.9	2.8	8¾	.600	24.1
Eggs and egg products	do.	341	6.7	2.7	9¾	.623	25.0
	Females	764	5.1	2.0	9	.459	18.4
Tobacco	Males	1,356	7.9	3.2	10¾	.822	33.0
	Females	4,401	7.0	2.8	8¾	.581	23.3
	Children	113	4.2	1.7	9½	.416	16.7
Paper and printing:							
Paper making	Males	792	6.0	2.4	11	.660	26.5
	Females	270	3.2	1.3	11	.352	14.1
Printing	Males	2,058	14.6	5.9	8¾	1.226	49.2
	Females	288	10.2	4.1	8½	.826	33.1
	Children	125	4.1	1.6	10½	.418	16.8

TABLE 2.—AVERAGE MONTHLY EARNINGS OF FACTORY WORKERS IN VARIOUS INDUSTRIES IN GREATER SHANGHAI, 1929

[Conversions into United States currency on basis of exchange rate of yuan dollar for 1929=41.9 cents]

Industry	Type of worker	Average monthly earnings	
		Chinese currency	United States currency
Woodworking: Sawing	Males ¹	\$19.25	\$8.07
Metallurgy: Foundry	do.	23.81	9.98
Machinery, metal tools, and utensils:			
Machinery	do.	29.53	12.37
Electrical machines and appliances	do.	23.49	9.84
	Females	12.72	5.33
	Children ²	12.95	5.43
Construction of boats, ships, and vehicles for land and transport:	Males ¹	38.20	16.01
Shipbuilding	Children	15.25	6.39
Manufacture of brick, earthenware, glass, etc.:			
Glass	Males ¹	16.25	6.81
	Children	9.44	3.96
Cement and tiles	Males ¹	19.09	8.00
Electricity and waterworks:			
Electricity	do.	25.89	10.85
Waterworks	do.	27.97	11.72
Manufacture of chemicals and allied products:			
Soap and candles	do.	18.72	7.84
	Females	8.75	3.67
Paint and varnish	Males ¹	18.37	7.70
	Children	11.51	4.82
Matches	Males ¹	21.39	8.96
	Females	5.51	2.31
	Children	11.38	4.77
Enameling	Males ¹	18.03	7.55
	Females	8.31	3.48
Toilet preparations	Males ¹	19.65	8.23
	Females	8.76	3.67

¹ Constituted principal type of workers in the industry.² Only 1 factory in industry of electrical machines and appliances employs children. Work for this type of labor suspended in February and December.

TABLE 2.—AVERAGE MONTHLY EARNINGS OF FACTORY WORKERS IN VARIOUS INDUSTRIES IN GREATER SHANGHAI, 1929—Continued

Industry	Type of worker	Average monthly earnings	
		Chinese currency	United States currency
Textiles:			
Silk reeling.....	Females ¹	\$13. 21	\$5. 53
	Children.....	8. 37	3. 51
Cotton spinning.....	Males.....	15. 28	6. 40
	Females ¹	12. 50	5. 24
	Children.....	8. 07	3. 38
Silk weaving.....	Males ¹	30. 31	12. 70
	Females.....	20. 17	8. 45
	Children ²		
Cotton weaving.....	Males ¹	23. 54	9. 86
	Females.....	11. 69	4. 90
	Children.....	18. 09	7. 58
Silk and cotton knitting.....	Males ¹	18. 83	7. 89
	Females.....	15. 41	6. 46
Wool weaving.....	Males ¹	16. 54	6. 93
	Females.....	9. 43	3. 95
Bleaching and dyeing.....	Males ¹	21. 60	9. 05
Manufacture of leather, skin, and rubber: Tanning.....	do.....	20. 39	8. 54
	Females.....	12. 32	5. 16
	Children.....	8. 41	3. 52
Manufacture of food, drinks, and tobacco:			
Flour.....	Males ¹	17. 61	7. 38
Oils and their by-products.....	do.....	17. 28	7. 24
Eggs and egg products.....	do.....	20. 89	8. 75
	Females.....	11. 65	4. 88
Canned goods.....	Males ¹	25. 81	10. 81
	Females.....	11. 05	4. 63
Cold drinks and refrigerating.....	Males ¹	18. 94	7. 94
Tobacco.....	Males.....	23. 86	10. 00
	Females ¹	12. 82	5. 37
	Children.....	9. 38	3. 93
Paper and printing:			
Paper.....	Males ¹	20. 60	8. 63
	Females.....	8. 72	3. 65
	Children.....	9. 46	3. 96
Printing.....	Males ¹	47. 50	19. 90
	Females.....	31. 24	13. 09

¹ Constituted principal type of workers in the industry.² Wages of children in silk weaving have been increased to the level of adult workers.

Wages in France in October, 1930

THE annual wage study made by the General Statistical Bureau of France¹ gives the average wages of certain classes of workers who are represented in nearly all localities and which furnish, therefore, uniform elements of comparison. The information is furnished by officers of trade councils, employers' organizations, and mayors or other competent persons.

Table 1 gives the hourly wages in different occupations in October, 1929 and 1930, in Paris and other cities:

¹ France. Ministère du Travail. Bulletin de la Statistique Générale de la France, January-March, 1931, pp. 216-232.

TABLE 1.—AVERAGE HOURLY WAGES IN FRENCH CITIES, OCTOBER, 1929, AND OCTOBER, 1930, BY OCCUPATION

[Conversions into United States currency on basis of franc=3.92 cents]

Occupation	Average hourly wages in—							
	Paris and its environs				Cities other than Paris			
	1929		1930		1929		1930	
	French currency	United States currency	French currency	United States currency	French currency	United States currency	French currency	United States currency
	Francs	Cents	Francs	Cents	Francs	Cents	Francs	Cents
<i>Males</i>								
Brewers.....					3.36	13.2	3.60	14.1
Printers, compositors.....	6.25	24.5	6.60	25.9	4.19	16.4	4.45	17.4
Bookbinders.....	5.10	20.0	5.35	21.0	4.01	15.7	4.27	16.7
Tanners.....					3.48	13.6	3.80	14.9
Saddlers, harness makers.....					3.52	13.8	3.80	14.9
Shoemakers.....					3.42	13.4	3.65	14.3
Tailors.....	6.00	23.5	6.50	25.5	3.75	14.7	4.10	16.1
Dyers, scourers.....					3.56	14.0	3.77	14.8
Weavers.....					3.11	12.2	3.27	12.8
Rope makers.....					3.40	13.3	3.48	13.6
Wheelwrights.....					3.74	14.7	4.00	15.7
Wood turners.....	6.25	24.5	6.75	26.5	3.94	15.4	4.20	16.5
Coopers.....					3.78	14.8	4.03	15.8
Cabinetmakers.....	6.75	26.5	6.75	26.5	4.02	15.8	4.50	17.6
Upholsterers.....					3.96	15.5	4.20	16.5
Pit sawyers.....	6.25	24.5	6.25	24.5	3.82	15.0	4.10	16.1
Carpenters.....	6.00	23.5	6.25	24.5	4.06	15.9	4.23	16.6
Joiners.....	5.75	22.5	6.25	24.5	3.89	15.2	4.16	16.3
Coppersmiths.....					4.09	16.0	4.37	17.1
Tinsmiths.....					3.84	15.1	4.05	15.9
Plumbers.....	5.75	22.5	6.50	25.5	3.92	15.4	4.20	16.5
Blacksmiths.....	6.25	24.5	6.45	25.3	3.91	15.3	4.22	16.5
Farriers.....					3.72	14.6	4.00	15.7
Stove makers.....					3.86	15.1	4.10	16.1
Locksmiths.....	5.75	22.5	6.50	25.5	3.78	14.8	4.10	16.1
Metal turners.....	6.25	24.5	6.45	25.3	4.03	15.8	4.37	17.1
Watchmakers.....	6.50	25.5			4.20	16.5	4.47	17.5
Quarrymen.....	5.75	22.5	6.50	25.5	3.78	14.8	4.07	16.0
Stonecutters.....	7.50	29.4	9.25	36.3	4.29	16.8	4.67	18.3
Masons.....	6.00	23.5	6.50	25.5	4.03	15.8	4.42	17.3
Navvies.....	6.00	23.5	6.25	24.5	3.45	13.5	3.75	14.7
Tilers.....	5.75	22.5	6.50	25.5	4.00	15.7	4.32	16.9
House painters.....	5.50	21.6	6.50	25.5	3.82	15.0	4.17	16.3
Ornamental carvers.....	6.50	25.5	7.50	29.4	4.79	18.8	5.27	20.7
Brickmakers.....	5.75	22.5	6.50	25.5	3.70	14.5	4.00	15.7
Potters.....					3.56	14.0	3.87	15.2
Glaziers.....	6.00	23.5	6.65	26.1	3.72	14.6	4.15	16.3
Laborers.....					2.95	11.6	3.18	12.5
Average all occupations.....	6.07	23.8	6.61	25.9	3.83	15.0	4.08	16.0
<i>Females</i>								
Ironers.....					2.27	8.9	2.48	9.7
Dressmakers.....					2.39	9.4	2.45	9.6
Seamstresses.....					2.16	8.5	2.29	9.0
Waistcoat makers.....					2.26	8.9	2.43	9.5
Lace makers.....					2.26	8.9	2.47	9.7
Embroiderers.....					2.29	9.0	2.39	9.4
Milliners.....					2.24	8.8	2.46	9.6
Average, all occupations.....					2.26	8.9	2.42	9.5

Table 2, furnished for the study by the employment service of the clothing industries, shows the average weekly wages paid to female workers in dressmaking and lingerie shops and the average monthly wages paid in fashionable dressmaking shops in 1929 and 1930:

TABLE 2.—AVERAGE WEEKLY AND MONTHLY WAGES IN FRENCH DRESSMAKING SHOPS, OCTOBER, 1929 AND OCTOBER, 1930

[Conversions into United States currency on basis of franc=3.92 cents]

Occupation	October, 1929		October, 1930	
	Francs	United States currency	Francs	United States currency
<i>Weekly rates</i>				
Dressmaking and lingerie shops:				
First hands, female.....	208. 80	\$8. 18	218. 40	\$8. 56
Second hands, female.....	156. 00	6. 12	163. 20	6. 40
Helpers, female.....	110. 00	4. 31	115. 20	4. 52
Apprentices, female.....	50. 40-79. 00	1. 98-3. 10	52. 80-82. 80	2. 07-3. 25
<i>Monthly rates</i>				
Fashionable dressmaking shops:				
Skilled fitters.....	832. 00	\$32. 61	936. 00	\$36. 69
Workers of medium skill.....	776. 00	30. 42	748. 40	29. 34
Helpers.....	500. 00	19. 60	520. 00	20. 38
Apprentices.....	160. 00-222. 00	6. 27-8. 70	208. 00-260. 00	8. 15-10. 19

A comparison of wages and cost of living (Table 3) as represented by the cost of board and lodging for an unmarried worker in the same localities for which data for wages were secured shows that there was some improvement during the year in the purchasing power of wages, as living costs increased only about 3 per cent while the average daily wages of men and women had increased approximately 7 and 8 per cent, respectively. The retail price index (based on 13 articles), however, increased nearly 9.8 per cent from November, 1929, to November, 1930.

TABLE 3.—AVERAGE DAILY WAGES AND COST OF BOARD AND LODGING IN FRANCE, OCTOBER, 1929 AND 1930, AND INDEX NUMBERS THEREOF AND OF RETAIL PRICES IN NOVEMBER, 1929 AND 1930

[Conversions into United States currency on basis of franc=3.92 cents]

Item	October, 1929		October, 1930		Index numbers (1911=100)	
	French currency	United States currency	French currency	United States currency	October, 1929	October, 1930
Daily wages:	<i>Francs</i>		<i>Francs</i>			
Men.....	31. 34	\$1. 23	33. 56	\$1. 32	685	732
Women.....	18. 30	. 72	19. 79	. 78	800	866
Cost of board and lodging per month.....	520. 00	20. 38	537. 00	21. 05	744	767
Retail price of 13 articles ¹					584	641

¹ For November, 1929 and 1930, respectively.

A study of the wages of domestic servants was made by the General Statistical Office during the third quarter of 1930 in cities of more than 10,000 inhabitants. In addition to the cash wages these workers receive board and lodging, the cost of which for the country as a whole averaged about 3,500 francs (\$137.20) in 1930.

Table 4 shows the average wages of different classes of servants in France in the third quarter of 1930:

TABLE 4.—WAGES OF SERVANTS IN FRANCE IN 1930
[Conversions into United States currency on basis of franc=3.92 cents]

Class of servant	Average annual wages ¹	
	French currency	United States currency
	<i>Francs</i>	
Cooks, male.....	10,088	\$395.45
Cooks, female.....	4,849	190.08
Cooks' assistants, male.....	5,183	203.17
Cooks' assistants, female.....	3,309	129.71
Valet.....	5,512	216.07
Lady's maid.....	3,683	144.37
Coachmen.....	5,657	221.75
Chauffeurs.....	7,128	279.42
General servants, male.....	4,564	178.91
General servants, female.....	3,141	123.13
Charwomen.....	² 266	² 10

¹ Board and lodging in addition.

² Per hour.

Wages in French coal mines were reduced in 1927 because of the unfavorable condition of the coal market, but in the course of 1929 the commercial situation of the coal companies had improved and wages were raised in the Nord and Pas-de-Calais on April 16 and October 1, and in the Loire, October 1. Table 5 shows the average daily wages of underground and surface workers in 1929 and 1930, by quarters:

TABLE 5.—AVERAGE DAILY WAGES OF UNDERGROUND AND OF SURFACE WORKERS IN FRENCH COAL MINES, 1929 AND 1930, BY QUARTERS

[Conversions into United States currency on basis of franc=3.92 cents]

Date	Average daily wages of—					
	Underground workers		Surface workers		Underground and surface workers	
	French currency	United States currency	French currency	United States currency	French currency	United States currency
1929:	<i>Francs</i>		<i>Francs</i>		<i>Francs</i>	
First quarter.....	35.01	\$1.37	25.83	\$1.01	32.32	\$1.27
Second quarter.....	36.58	1.43	26.99	1.06	33.71	1.32
Third quarter.....	37.34	1.46	27.57	1.08	34.43	1.35
Fourth quarter.....	39.74	1.56	29.44	1.15	36.70	1.44
1930:						
First quarter.....	39.85	1.56	29.58	1.16	36.86	1.44
Second quarter.....	39.97	1.57	29.71	1.16	36.94	1.45
Third quarter.....	40.16	1.57	29.84	1.17	37.06	1.45
Fourth quarter ¹	40.32	1.58	29.84	1.17	37.16	1.46

¹ Bulletin de la Statistique Générale de la France, Apr.-June, 1931, p. 346.

In connection with the law of December 15, 1922, extending the workmen's compensation law to cover agricultural workers, each prefect is required to furnish a table of wages classified by occupations and, when possible, by locality. These reports are made every two years. The average wages of agricultural workers vary greatly in the different departments. The lowest yearly wages reported for day laborers were 3,060 francs (\$119.95) in the Department of Alpes (Haute) while the highest, 9,750 francs (\$382.20) with board and lodging, were paid in the Department of the Seine. The wages of farm hands varied from 4,112 francs (\$161.19) in the Department of Loire-Inférieure to 11,000 francs (\$431.20) in the Department of Aveyron, while the annual wages of teamsters ranged from 4,800 francs (\$188.16) in the Department of Dordogne to 11,250 francs (\$441) in the Department of the Seine, in the latter case board and lodging also being furnished. Among woman farm laborers, the lowest wages, 1,300 francs (\$50.96), were found in the Department of Finistère, and the highest, 7,500 (\$294), in the Department of Maine-et-Loire, while the wages of farm servants ranged from 2,500 francs (\$98) in Ariège to 8,000 francs (\$313.60) in Aveyron. In addition to the cash wages, farm workers also receive various payments in kind.

Table 6 shows the average daily and yearly wages of the different classes of farm workers in 1928 and 1930:

TABLE 6.—AVERAGE DAILY AND YEARLY WAGES OF DIFFERENT CLASSES OF AGRICULTURAL WORKERS IN FRANCE IN 1928 AND 1930

[Conversions into United States currency on basis of franc=3.92 cents]

Sex and occupation	Average wages in—							
	1928				1930			
	Per day		Per year		Per day		Per year	
	French currency	United States currency	French currency	United States currency	French currency	United States currency	French currency	United States currency
Males:	<i>Francs</i>		<i>Francs</i>		<i>Francs</i>		<i>Francs</i>	
Laborers.....	20.60	\$0.81	5,642	\$221.17	22.50	\$0.88	6,202	\$243.12
Farm hands.....	18.94	.74	5,993	234.93	20.85	.82	6,690	262.25
Teamsters.....	21.56	.85	6,699	262.60	23.73	.93	7,437	291.53
Females:								
Laborers.....	14.20	.56	3,595	140.92	15.41	.60	3,933	154.17
Farm servants.....	13.58	.53	4,324	169.50	14.74	.58	4,806	188.40

Wages and Hours in the Textile Industry in Germany, 1930

THE results of an investigation of wages and hours in the textile industry in Germany, undertaken in accordance with the wage statistics act of 1922, have recently been published by the German Federal Statistical Office.¹ The investigation covered 55,795 textile workers employed in 466 establishments in 121 localities in September, 1930.

¹ Germany. Statistisches Reichsamt. Wirtschaft und Statistik, Berlin, 2. Juni-Heft, 1931, pp. 459-462.

The figures in Table 1 show the average hours of work per week, average hourly earnings, agreement hourly rates, and the average weekly earnings:

TABLE 1.—WAGES AND HOURS OF SPINNERS AND WEAVERS, 1930
[Conversions into United States currency on basis of mark=23.8 cents, pfennig=0.238 cent]

Occupation, sex, and age	Average hourly earnings				Agreement hourly wage or wage on piece-rate basis		Average working hours per week	Average weekly earnings	
	Including allowances		Excluding allowances						
	German currency	United States currency	German currency	United States currency	German currency	United States currency		German currency	United States currency
Spinners:	<i>Pfennigs</i>	<i>Cents</i>	<i>Pfennigs</i>	<i>Cents</i>	<i>Pfennigs</i>	<i>Cents</i>		<i>Marks</i>	
Male.....	92.1	21.9	90.9	21.6	80.5	19.2	42.51	39.14	\$9.32
Female.....	60.7	14.4	60.3	14.4	53.3	12.7	40.74	24.73	5.89
Weavers: ¹									
Male.....	93.9	22.3	92.3	22.0	73.1	17.4	43.60	40.94	9.74
Female.....	71.7	17.1	70.5	16.8	60.7	14.4	41.59	29.57	7.04
Assistants:									
Male, over 20 years...	70.0	16.7	68.9	16.4	62.8	14.9	45.41	31.80	7.57
Female, over 20 years...	51.3	12.2	50.9	12.1	46.8	11.1	43.04	22.06	5.25

¹ Including frame workers and twist hands.

As is seen from the above, the average hourly earnings, without allowances, exceeded hourly agreement rates by varying amounts, from 26.4 per cent and 16.7 per cent, respectively, for male and female weavers to 9 per cent for female assistants.

Table 2 shows the number of workers covered, the average number of hours worked per week, the average hourly earnings, the average agreement wages per hour, and the average weekly earnings in each of the 10 branches of the textile industry investigated.

TABLE 2.—WAGES AND HOURS, BY INDUSTRY, OCCUPATION, AND SEX, SEPTEMBER, 1930

[Conversions into United States currency on basis of mark=23.8 cents, pfennig=0.238 cent]

Industry, occupation, and sex	Num- ber of work- ers	Aver- age work- ing hours per week	Average hourly earnings		Agreement hourly wage or wage on piece-rate basis		Average weekly earnings	
			German currency	United States cur- rency	German currency	United States cur- rency	Ger- man cur- rency	United States cur- rency
<i>Cotton</i>								
Spinners:			<i>Pfennigs</i>	<i>Cents</i>	<i>Pfennigs</i>	<i>Cents</i>	<i>Marks</i>	
Male.....	942	40.14	87.9	20.9	78.2	18.6	35.75	\$8.51
Female.....	4,782	40.53	61.9	14.7	54.4	12.9	25.26	6.01
Weavers:								
Male.....	6,766	41.92	80.6	19.2	69.7	16.6	34.29	8.16
Female.....	6,574	41.39	68.2	16.2	61.2	14.6	28.42	6.76
Assistants:								
Male, over 20 years.....	2,738	44.13	66.4	15.8	61.3	14.6	29.69	7.07
Female, over 20 years.....	2,139	42.55	48.9	11.6	45.6	10.9	20.98	4.99
<i>Worsted spinning</i>								
Spinners:								
Male.....	673	45.58	96.2	22.9	87.2	20.8	44.18	10.51
Female.....	1,174	42.39	57.3	13.6	53.1	12.6	24.50	5.83
Assistants:								
Male, over 20 years.....	646	48.92	70.7	16.8	63.2	15.0	35.03	8.34
Female, over 20 years.....	403	46.98	46.6	11.1	43.9	10.6	22.15	5.20

TABLE 2.—WAGES AND HOURS, BY INDUSTRY, OCCUPATION, AND SEX, SEPTEMBER, 1930—Continued

Industry, occupation, and sex	Number of workers	Average working hours per week	Average hourly earnings		Agreement hourly wage or wage on piece-rate basis		Average weekly earnings	
			German currency	United States currency	German currency	United States currency	German currency	United States currency
Wool								
Spinners:			<i>Pfennigs</i>	<i>Cents</i>	<i>Pfennigs</i>	<i>Cents</i>	<i>Marks</i>	
Male.....	387	42.93	88.0	20.9	73.4	17.5	38.61	\$9.19
Female.....	721	45.64	54.2	12.9	49.7	11.8	24.98	5.95
Weavers:								
Male.....	9,085	44.73	93.7	22.3	73.0	17.4	42.26	10.06
Female.....	2,788	43.98	77.0	18.3	63.0	15.0	34.01	8.74
Assistants:								
Male, over 20 years.....	930	49.07	73.3	17.4	66.9	15.9	36.73	8.74
Female, over 20 years.....	1,137	45.84	55.0	13.1	50.5	12.0	25.38	6.04
Linen								
Spinners, female.....	723	34.57	61.3	14.6	50.0	11.9	21.31	5.07
Weavers:								
Male.....	733	36.64	74.6	17.8	66.8	15.9	27.41	6.52
Female.....	1,270	36.89	59.3	14.1	54.2	12.9	21.92	5.22
Assistants:								
Male, over 20 years.....	446	41.18	67.3	16.0	60.1	14.3	28.18	6.71
Female, over 20 years.....	425	35.67	49.4	11.8	44.1	10.5	17.70	4.21
Ribbon weaving								
Weavers:								
Male.....	900	45.99	101.0	24.0	79.6	18.9	48.77	11.61
Female.....	26	45.12	74.8	17.8	60.5	14.4	34.18	8.13
Assistants:								
Male, over 20 years.....	46	43.75	72.5	17.3	63.4	15.1	32.56	7.75
Female, over 20 years.....	328	45.68	50.3	12.0	48.3	11.5	23.15	5.51
Hosiery								
Frame workers:								
Male.....	1,554	47.32	113.7	27.1	74.7	17.8	55.13	13.12
Female.....	288	43.46	63.4	15.1	44.8	10.7	27.66	6.58
Assistants:								
Male, over 20 years.....	17	49.90	67.3	16.0	58.4	13.9	33.68	8.02
Female, over 20 years.....	99	43.53	49.1	11.7	41.0	9.8	21.51	5.12
Knit goods								
Frame workers:								
Male.....	591	43.93	107.7	25.6	73.7	17.5	47.65	11.34
Female.....	596	40.90	64.6	15.4	50.7	12.1	27.28	6.49
Assistants:								
Male, over 20 years.....	284	46.51	74.2	17.7	64.2	15.3	34.81	8.28
Female, over 20 years.....	535	41.44	53.1	12.6	46.9	11.2	22.21	5.29
Lace making								
Twist hands:								
Male.....	430	29.02	124.3	29.6	85.6	20.4	36.47	8.68
Female.....	116	29.05	65.1	15.5	56.2	13.4	18.90	4.50
Assistants:								
Male, over 20 years.....	60	40.38	67.2	16.0	63.5	15.1	20.69	4.92
Female, over 20 years.....	220	36.92	47.7	11.4	44.6	10.6	17.65	4.20
Velvet weaving								
Weavers, male.....	1,031	45.44	106.1	25.3	87.0	20.7	50.58	12.04
Assistants:								
Male, over 20 years.....	30	42.67	62.2	14.8	66.0	15.7	27.00	6.43
Female, over 20 years.....	11	44.43	54.0	12.9	53.5	12.7	24.18	5.75
Silk weaving								
Weavers:								
Male.....	1,002	45.89	89.2	21.2	71.6	17.0	42.06	10.01
Female.....	1,765	42.67	78.7	18.7	65.3	15.5	34.03	8.10
Assistants:								
Male, over 20 years.....	124	48.56	72.7	17.3	65.0	15.5	36.74	8.74
Female, over 20 years.....	170	47.03	58.0	13.8	50.7	12.1	27.67	6.59

In certain restricted areas common to the present and to earlier wage investigations, the average hourly earnings in 1913, 1927, and 1930, the agreement wage rates in 1927 and 1930, and the percentage comparison between agreement rates and earnings for each of these two years are given in the following table:

TABLE 3.—COMPARISON OF AVERAGE HOURLY EARNINGS AND AGREEMENT WAGE
SEPTEMBER, 1927 AND 1930

[Conversions into United States currency on basis of mark=23.8 cents, pfennig=0.238 cent]

Occupation and sex	Average hourly earnings						Agreement hourly rate or rate on a piece-rate basis				Per cent actual earnings form of agreement rate	
	1913		September, 1927 ¹		September, 1930 ¹		September, 1927		September, 1930			
	German currency	United States currency	German currency	United States currency	German currency	United States currency	German currency	United States currency	German currency	United States currency	September, 1927	September, 1930
Spinners:	<i>Pfen-nigs</i>	<i>Cents</i>	<i>Pfen-nigs</i>	<i>Cents</i>	<i>Pfen-nigs</i>	<i>Cents</i>	<i>Pfen-nigs</i>	<i>Cents</i>	<i>Pfen-nigs</i>	<i>Cents</i>		
Male.....	44.6	10.6	87.0	20.7	95.0	22.6	71.4	17.0	80.6	19.2	118.9	116.3
Female.....	28.1	6.7	56.4	13.4	61.2	14.6	47.9	11.4	53.7	12.8	115.9	113.2
Weavers: ²												
Male.....	44.8	10.7	84.3	20.1	94.8	22.6	64.7	15.4	74.1	17.6	127.0	125.6
Female.....	31.6	7.5	63.8	15.2	72.0	17.1	53.2	12.7	62.0	14.8	118.4	115.2
Assistants:												
Male, over 20 years..	34.6	8.2	63.6	15.1	70.2	16.7	55.6	13.2	62.8	14.9	110.3	110.0
Female, over 20 years.....	25.1	6.0	45.1	10.7	50.7	12.1	41.4	9.9	46.3	11.0	107.3	108.9

¹ Including agreement supplements.

² Including frame workers and twist hands.

Thus the average hourly earnings in September, 1927, were about double those in 1913, while during the time from 1927 to 1930 a further increase of about 10 per cent for all classes took place.

The following table shows the average weekly hours and the average weekly earnings in 1913, 1927, and 1930:

TABLE 4.—AVERAGE WEEKLY HOURS AND EARNINGS, 1913 AND SEPTEMBER, 1927 AND 1930

[Conversions into United States currency on basis of mark=23.8 cents, pfennig=0.238 cent]

Occupation and sex	Average working hours per week			Average weekly earnings					
	1913	September, 1927 ¹	September, 1930 ¹	1913		September, 1927		September, 1930	
				German currency	United States currency	German currency	United States currency	German currency	United States currency
Spinners:				<i>Marks</i>		<i>Marks</i>		<i>Marks</i>	
Male.....	57.3	50.9	42.5	25.74	\$6.13	44.29	\$10.54	40.36	\$9.61
Female.....	56.8	49.8	41.7	15.96	3.80	28.08	6.68	25.50	6.07
Weavers: ²									
Male.....	57.2	49.9	43.1	25.63	6.10	42.09	10.02	40.79	9.71
Female.....	57.0	49.3	40.2	18.00	4.28	31.45	7.49	29.52	7.03
Assistants:									
Male, over 20 years.....	57.5	53.1	46.0	19.91	4.74	33.78	8.04	32.29	7.69
Female, over 20 years.....	56.3	49.6	42.2	14.14	3.37	22.40	5.33	21.41	5.10

¹ Including agreement supplements.

² Including frame workers and twist hands.

The considerable decline of weekly working hours between 1913 and 1927 is accounted for by the introduction of the normal working week of 48 hours, while the decline between 1927 and 1930 is explained by a trade depression, during which short-time work was practiced in a number of branches of the textile industry.

The weekly earnings in September, 1927, show increases over those in 1913 in varying percentages from 58.4 for female assistants to 75.9 for female spinners. But during the period between 1927 and 1930 the earnings fell by about 10 per cent for spinners, about 3 per cent for male weavers, about 6 per cent for female weavers, and about 4½ per cent for male and female assistants.

The table below compares actual earnings for each group of workers in 1913, 1927, and 1930. The comparison is based upon weekly earnings after all taxes and insurance contributions have been deducted and upon the German Federal cost-of-living index figures, which were 147.1 in September, 1927, and 146.9 in September, 1930. The comparison is expressed both as money wages and as index numbers by taking the year 1913 as a base or 100.

TABLE 5.—ACTUAL WEEKLY EARNINGS FOR SPECIFIED OCCUPATIONS, 1913, AND SEPTEMBER, 1927 AND 1930, AND INDEX NUMBERS THEREOF

[Conversions into United States currency on basis of mark = 23.8 cents, pfennig = 0.238 cent]

Occupation and sex	1913		September, 1927			September, 1930		
	German currency	United States currency	German currency	United States currency	Index number (1913=100)	German currency	United States currency	Index number (1913=100)
Spinners:	Marks		Marks			Marks		
Male.....	24.30	\$5.78	27.21	\$6.48	112.0	24.62	\$5.86	101.3
Female.....	15.10	3.59	17.30	4.12	114.6	15.69	3.73	103.9
Weavers: ¹								
Male.....	24.19	5.76	25.74	6.13	106.4	24.78	5.90	102.4
Female.....	17.14	4.08	19.25	4.58	112.3	17.96	4.27	104.8
Assistants:								
Male, over 20 years.....	18.99	4.52	20.79	4.95	109.5	19.78	4.71	104.2
Female, over 20 years.....	13.52	3.22	13.92	3.31	103.0	13.21	3.14	97.7

¹ Including frame workers and twist hands.

The table below shows various deductions from weekly gross earnings in 1913, 1927, and 1930, as a percentage of gross earnings.

TABLE 6.—PER CENT OF DEDUCTION FROM GROSS EARNINGS ON ACCOUNT OF WAGE TAX AND PUBLIC INSURANCE CONTRIBUTIONS

Occupation and sex	Per cent deducted from gross income for—						All deductions, September		
	Wage (income) tax, September			Public insurance contributions, Sep- tember					
	1913	1927	1930	1913	1927	1930	1913	1927	1930
Spinners:									
Male.....	2.0	2.9	2.0	3.6	6.7	8.4	5.6	9.6	10.4
Female.....	1.3	1.5	0.7	3.6	7.9	8.9	4.9	9.4	9.6
Weavers: ¹									
Male.....	2.0	3.1	2.4	3.6	6.9	8.4	5.6	10.0	10.8
Female.....	1.3	2.4	1.8	3.6	7.6	8.9	4.9	10.0	10.7
Assistants:									
Male, over 20 years.....	1.0	1.8	1.3	3.7	7.6	8.7	4.7	9.4	10.0
Female, over 20 years.....	0.6	0.3	0.4	3.8	8.3	9.0	4.4	8.6	9.4

¹ Including frame workers and twist hands.

The considerable increase in workers' social insurance contributions is chiefly due to the repeated increases in the contributions for unemployment insurance.

Hours and Wages Provisions of English Coal Mines Act

ACCORDING to the Ministry of Labor Gazette for July, 1931, the new coal mines act, having passed both houses of Parliament, received the royal assent and became law on July 8. The coal mines act of 1930 had reduced hours from 8 to 7½ a day from January 1, 1931, till July 8, the date at which the prolongation of hours set up by the act of 1926 would come to an end, and it also permitted a "spreadover" of hours involving a different arrangement than the 7½-hour day, provided no more than 90 hours a fortnight were worked. The new act continues the 7½-hour day, without the spreadover, for one year or until the coming into effect of the Geneva convention establishing a 7¼-hour day, whichever is the shorter period.

The act further provides that for the same period the minimum percentage additions to the basic rates of wages, and the subsistence wage rates, shall not be less than those in force in any district on an "appointed day," with a proviso safeguarding the operation of any agreement entered into or custom existing before the commencement of the act.

The "appointed day" is defined as (1) the day before the commencement of the act, in relation to any district for which wages were regulated on the basis of a daily limit of 7½ hours' work below ground on that day; and (2) the first day after the commencement of the act on which wages are so regulated, in other districts.

Scotland, North Wales, and Cumberland are the most important of the "other districts" referred to, the spreadover having been in effect in these fields. It is believed that for these the bill will involve a downward readjustment of wages. Nevertheless, the delegates from Scotland and North Wales, being fully aware of this probable result, voted in the miners' conference for the acceptance of the terms.

Wages in Hungary in 1931

THE following table shows money wages offered at employment offices in Budapest, the capital of Hungary.¹

WEIGHTED AVERAGE HOURLY MONEY WAGES OFFERED AT EMPLOYMENT OFFICES IN BUDAPEST, HUNGARY

[Conversions into United States currency on basis of pengo=17.5 cents]

Group of workers	Monthly average in 1929		July, 1930		March, 1931	
	Hunga- rian cur- rency	United States currency	Hunga- rian cur- rency	United States currency	Hunga- rian cur- rency	United States currency
	Pengo	Cents	Pengo	Cents	Pengo	Cents
Plumbers.....	0.81	14.2	0.70	12.3	0.66	11.6
Cabinetmakers.....	.66	11.6	.71	12.4	.60	10.5
Tailors.....	.55	9.6	.53	9.3	.49	8.6
Bricklayers.....	.85	14.9	.83	14.5	.78	13.7
Day laborers, male.....	.50	8.8	.44	7.7	.43	7.5
Day laborers, female.....	.43	7.5	.35	6.1	.32	5.6
Factory hands, female.....	.32	5.6	.24	4.2	.22	3.9

¹ Economic Bulletin of the Central Corporation of Banking Companies, Budapest, Vol. VII (1931), No. 2, p. 88.

Wages in Certain Occupations and Industries in Italy

Textile Industry

THE present article is supplementary to an article in the July, 1931, Labor Review (pp. 161-175), giving the latest available data regarding wages in the textile industry in various European countries.

Leghorn¹

Silk spinning.—The 23 silk-spinning mills in the Province of Lucca employ about 700 workers, most of whom are women. The rates of wages for an 8-hour day, as fixed by a commercial agreement, are as follows:

Women:	Daily wage rate ²
Apprentices.....	3. 85 lire [20. 3 cents].
Assistant spinners, class 1.....	4. 60 lire [24. 2 cents].
Assistant spinners, class 2.....	5. 20 lire [27. 4 cents].
Medium spinners, class 1.....	5. 80 lire [30. 5 cents].
Medium spinners, class 2.....	6. 25 lire [32. 9 cents].
Spinners.....	6. 80 lire [35. 8 cents].
Expert spinners.....	7. 35 lire [38. 7 cents].
Men: Laborers.....	12. 50 lire [65. 8 cents].

Cotton mills.—Wages for an 8-hour day in the Department of Tuscany, as regulated by the national cotton labor contract, since December 1, 1930, have been as follows:

Men:	Daily wage rate
Medium workers.....	16 to 20 lire [\$0. 84-\$1. 05].
Skilled workers.....	22 lire [1. 16].
Women:	
Medium workers.....	6 to 12 lire [\$0. 32-\$0. 63].
Skilled workers.....	13 lire [0. 68].

The wages paid in cotton mills are regulated by the capacity of the individual workers.

Milan³

Silk industry.—This industry is operating from 3 to 4 days per week. Average wages for an 8-hour day are from 15 to 16 lire (78.9 to 84.2 cents) for male operatives and from 7 to 7.40 lire (36.8 to 38.9 cents) for female operatives.

Rayon industry.—This industry is operating 7 days a week, 24 hours a day. The average wages of operatives for an 8-hour day are 18 lire (94.7 cents) for males and 8 lire (42.1 cents) for females.

Velvet industry.—The velvet industry operates 5½ days a week and all operatives are women. The average wages for an 8-hour day are 15 to 20 lire (\$0.79 to \$1.05) for skilled operatives and 8 to 10 lire (42.1 to 52.6 cents) for unskilled operatives.

Velveteen industry.—This industry is operating 6 days a week. For an 8-hour day male operatives receive an average of from 16 to 18 lire (84.2 to 94.7 cents) and female operatives from 10.40 to 12 lire (54.7 to 63.1 cents).

¹ Data in this section furnished by Jose de Olivares, American consul at Leghorn, under date of June 20, 1931.

² Conversions into United States currency on basis of lira=5.26 cents.

³ Data for this section furnished by Frank C. Niccoli, American vice consul at Milan, under date of May 20, 1931.

Cotton industry.—This industry is operating 4 days a week. Average wages for an 8-hour day are 9.50 to 10.50 lire (50 to 55.2 cents) for male operatives and 8 to 9 lire (42.1 to 47.3 cents) for female operatives.

Naples⁴

Silk industry.—In Caserta, in the Naples consular district, three factories report average wages per 8-hour day for machine operatives to be from 14 to 16 lire (73.6 to 84.2 cents) for males and from 7 to 8 lire (36.8 to 42.1 cents) for females. The greater part of the work, however, is reported to be handwork for which piece rates are paid as follows: Silk tissues, 8 lire (42.1 cents) per meter (39.37 inches), and silk damask bed covers, 30 lire (\$1.58) per piece. On this basis, by working 14 hours, a maximum of from 50 to 60 lire (\$2.63 to \$3.16) may be earned. These factories are operating only from 3 to 4 days a week.

Cotton industry.—In the Province of Salerno, wages as reported by three plants employing about 3,000 workers are for an 8-hour day. Rates for males are from 12 to 16 lire (63.1 to 84.2 cents) and for females from 8 to 10 lire (42.1 to 52.6 cents).

Hemp tissue.—Two factories in Salerno producing hemp textiles report wage rates of from 12 to 14 lire (63.1 to 73.6 cents) for male operatives and from 8 to 9 lire (42.1 to 47.3 cents) for females for an 8-hour day.

Turin⁵

Cotton-velvet industry.—Reports from four manufacturers in the Province of Turin show that hourly wages range from 0.90 to 1.50 lire (4.7 to 7.9 cents) for women and from 1.80 to 2.50 lire (9.5 to 13.2 cents) for men. Three of the four firms operate on an 8-hour day basis 4 days per week, while one firm operates 5 days per week and 5 hours per day.

Certain Classes of Agricultural Workers in the Province of Rome

THE following wage scale, printed in *Il Lavoro Fascista*, July 26 1931, became effective July 15, 1931, for machine workers on the farms in the Province of Rome: Licensed machinists and conductors, 33 lire (\$1.74) per day of 10 hours; firemen and plowmen on machines, 25 lire (\$1.32) per day; licensed gas engine conductors, 27 lire (\$1.42) per day; nonlicensed gas engine conductors, 25 lire (\$1.32) per day. Piecework rates are to be arranged so as to give the normal worker 20 per cent more than day workers. For overtime on week days, 15 per cent extra will be paid; on holidays, 30 per cent extra; and for night work, 35 per cent extra.

Selected Occupations in Milan, Italy

ACCORDING to a report from James W. Gantenbrin, American vice consul at Milan, sent February 28, 1931, the prevailing wages in the Milan district as computed by the consulate following the recent changes in scales are as follows:

⁴ Data for this section furnished by Ralph A. Boernstein, American consul at Naples, under date of July 18, 1931.

⁵ Data for this section furnished by William W. Heard, American consul at Turin, under date of July 8, 1931.

PRESENT WAGE SCALES AT MILAN, ITALY

[Conversions into United States currency on basis of lira=5.26 cents]

Industry and occupation	Lira	United States currency	Industry and occupation	Lira	United States currency
	Rate per hour			Rate per day	
Construction:			Textile industries:		
Masons.....	3. 18	\$0. 17	Weavers (females) ..	9-12	\$0. 47-0. 63
Carpenters.....	3. 41	. 18	Spinners (females) ..	8-10	. 42- . 53
Painters.....	3. 64	. 19			
Whitewashers.....	3. 36	. 18	Clerks and minor officers	Rate per month	
Apprentices.....	2. 86	. 15	in banks and similar		
Mechanical industries:			institutions:		
Skilled laborers.....	3. 13	. 17	First class.....	2, 500-5, 000	\$132. 00-263. 00
Unskilled laborers.....	2. 17	. 11	Second class.....	1, 000-2, 500	53. 00-132. 00
Furniture makers:			Third class.....	400-1, 000	21. 00- 53. 00
Skilled laborers.....	3. 30	. 17	Store salesmer.....	400-1, 200	21. 00- 63. 00
Unskilled laborers.....	2. 08	. 11	Store saleswomen.....	300-1, 000	17. 00- 53. 00

Wages in Lithuania, First Quarter of 1931

THE Central Statistical Bureau of the Lithuanian Ministry of Finance gives the following average wages paid at the end of the first quarter of 1931, as compared with the wages in December, 1930:¹

AVERAGE DAILY WAGES IN LITHUANIA IN DECEMBER, 1930, AND MARCH, 1931

Class of labor	Average rate per day	
	December, 1930	March, 1931
Male laborers.....	\$0. 45	\$0. 425
Female laborers.....	. 30	. 275
Laborers with horse.....	1. 14	1. 06

Wages in Manchuria, December, 1929

THE South Manchuria Railway Co. has on the pay rolls of its various enterprises approximately 20,000 Japanese employees and 13,000 regular Chinese employees. Furthermore, some 60,000 Chinese coolie day laborers are paid wages by the company which total from 5,500,000 to 6,000,000 yen per annum (United States currency \$2,750,000 to \$3,000,000).² The aggregate amount of wages paid by the company in the fiscal year ended March 31, 1930, was 28,800,000 yen (United States currency \$14,400,000), one-fourth of which was paid to Chinese employees.

The company's report for 1930 states that the Chinese laborers of the South Manchuria Railway and its affiliated corporations receive higher wages and have better living conditions than the Chinese employed by native undertakings. The same publication states:

Chinese labor is one of the important factors in the industrial life of Manchuria. Ordinary laborers, especially in agriculture, mining, and fishery, are almost all Chinese. Even in the Japanese Railway Zone, the leased territory and consular districts, where Japanese are in a more favorable condition, more than 93 per cent of farming labor, more than 70 per cent of fishermen, 96 per cent of miners and 88 per cent of factory laborers were Chinese, as calculated at the end of 1929.

¹ Information forwarded by Rudolph W. Hefti, American Consulate, Kovno, Lithuania, in report dated May 31, 1931.

² Yen = approximately 50 cents.

Table 1, taken from the report, shows the industrial distribution of the Chinese and Japanese day laborers employed in manufacturing establishments in the Japanese leased territory, railway zone, and consular districts. The substantial increase in the number of Chinese laborers from 1924 is one of the conspicuous features of this tabulation. Most of the Japanese listed are skilled workers or foremen.

TABLE 1.—DISTRIBUTION OF JAPANESE AND CHINESE DAY LABORERS IN VARIOUS MANUFACTURING ESTABLISHMENTS IN MANCHURIA, 1929

Manufacturing plants and mills	Number of fac- tories	Number of day laborers		
		Japanese	Chinese	Total
<i>Kind of plant</i>				
Spinning and weaving.....	65	135,004	2,530,986	2,665,990
Metal works.....	79	367,505	1,964,374	2,331,879
Machinery and furniture.....	72	418,155	1,626,727	2,044,882
Bean oil and other chemical works.....	206	201,880	2,868,745	3,070,625
Food and drink.....	177	87,555	1,317,572	1,405,127
Miscellaneous.....	164	231,451	1,286,310	1,517,761
Special industries.....	26	109,967	425,088	535,055
Total.....	789	1,551,517	12,019,802	13,571,319
<i>Year</i>				
1928.....	748	1,455,751	10,513,330	11,969,081
1927.....	717	1,507,070	10,486,723	11,993,793
1926.....	655	1,779,349	9,550,201	11,329,550
1925.....	653	1,419,299	8,897,912	10,317,211
1924.....	634	1,376,697	8,302,850	9,679,547

It will be noted from Table 2 that the wages of the skilled Japanese workers, as given in the report, are considerably higher than those of the skilled Chinese workers.

TABLE 2.—DAILY WAGES OF JAPANESE AND CHINESE SKILLED WORKERS IN THREE MANCHURIAN CITIES, DECEMBER, 1929

[Conversions into United States currency on basis of yen=approximately 50 cents]

Occupation and nationality	Daily wages at—					
	Dairen		Mukden		Changchun	
	Japanese currency	United States currency	Japanese currency	United States currency	Japanese currency	United States currency
Carpenter:	Yen		Yen		Yen	
Japanese.....	4.00	\$2.00	3.35	\$1.68	3.75	\$1.88
Chinese.....	1.40	.70	1.20	.60	1.05	.53
Mason:						
Japanese.....	4.50	2.25			5.00	2.50
Chinese.....	1.80	.90			1.35	.68
Joiner:						
Japanese.....	3.75	1.88	3.35	1.68	3.50	1.75
Chinese.....	1.40	.70	1.30	.65	1.05	.53
Painter:						
Japanese.....	3.30	1.65	3.30	1.50	3.50	1.75
Chinese.....	1.30	.65	1.00	.50	1.25	.63
Printer:						
Japanese.....	3.00	1.50	2.50	1.25	2.50	1.25
Chinese.....	1.40	.70	1.05	.53	1.08	.54
Iron worker:						
Japanese.....	3.50	1.75	3.55	1.78	3.50	1.75
Chinese.....	1.90	.95	1.40	.70	1.25	.63
Shoemaker:						
Japanese.....			2.10	1.05	3.00	1.50
Chinese.....	1.60	.80	1.10	.55	1.50	.75
Tailor:						
Japanese.....	3.50	1.75	3.05	1.53	3.00	1.50
Chinese.....	3.00	1.50	1.20	.60	1.50	.75
Sawyer: Chinese.....	1.40	.70	1.10	.55	1.50	.75
Ricksha-puller: Chinese.....	1.00-1.50	.50-.75	1.30-1.70	.65-.85	1.00-1.80	.50-.90
Coolie: Chinese.....	.55	.28	.50	.25	.55	.28

Japanese workers in the Manchurian factories are paid more than the Chinese, according to the report, but the wages of Chinese workers in the Japanese factories are in some instances over three times as much as those paid by Chinese mills or factories. This is shown in Table 3:

TABLE 3.—MINIMUM, MAXIMUM, AND AVERAGE DAILY WAGES OF CHINESE IN JAPANESE AND CHINESE FACTORIES, DECEMBER, 1929

[Conversions into United States currency on basis of yen=approximately 50 cents]

Kind of establishment	Japanese factories				Chinese factories			
	Range of wages		Average rate		Range of wages		Average rate	
	Japanese currency	United States currency	Japanese currency	United States currency	Japanese currency	United States currency	Japanese currency	United States currency
	Yen		Yen		Yen		Yen	
Spinning.....	0.34-1.85	\$0.17-\$0.93	0.57	\$0.29	0.25-0.58	\$0.13-\$0.29	0.46	\$0.23
Dyeing and weaving.....	.20-.89	.10-.45	.41	.22	.19-.50	.10-.25	.29	.15
Metal.....	.25-2.85	.13-1.43	.88	.44	.08-1.00	.04-.80	.31	.16
Pottery.....	.28-1.84	.14-.92	.66	.33	.17-.24	.09-.12	.19	.10
Bean oil.....	.45-1.50	.23-.75	.74	.37	.07-2.62	.04-1.01	.31	.16
Match.....	.26-.82	.13-.41	.39	.20			.30	.15
Paper.....	.25-1.90	.13-.95	.56	.28	.20-.70	.10-.35	.47	.24
Rice cleaning.....	.45-.80	.23-.40	.54	.27	.16-.67	.08-.39	.49	.25
Brewing.....	.46-.82	.23-.41	.57	.29	.22-.47	.11-.24	.31	.16
Printing.....	.30-2.58	.15-1.29	.76	.38	.07-1.50	.03-.75	.27	.14
Railways.....	.33-1.96	.16-.98	.63	.32	.29-1.15	.15-.58	.41	.21
Tramways.....	.32-1.04	.16-.52	.57	.29	.14-.97	.07-.49	.47	.24

The daily working hours of the Chinese employed in Japanese factories and of those employed in Chinese factories are given in Table 4:

TABLE 4.—DAILY WORKING HOURS OF CHINESE IN JAPANESE AND IN CHINESE FACTORIES IN MANCHURIA, JULY, 1928

Factories	Daily hours in—	
	Japanese factories	Chinese factories
Weaving and dyeing establishments.....	10.53	13.40
Metal works.....	9.35	10.45
Bean oil and other chemical works.....	10.27	10.48
Food and drink factories.....	9.48	11.40
Miscellaneous.....	10.10	13.00
Special.....	9.00	-----
Average.....	9.58	11.28

Chinese in Japanese factories in Manchuria are not only paid higher wages and have a shorter workday than those employed in Chinese factories, the report states, but they are also eligible for accident and sick benefits, workmen's compensation for dependents, and regular allowances in addition to wages, and have improved sanitary conditions, recreational facilities, and other welfare services.

TREND OF EMPLOYMENT

Summary for July, 1931

EMPLOYMENT decreased 2 per cent in July, 1931, as compared with June, 1931, and pay-roll totals decreased 4.8 per cent.

The industrial groups surveyed, the number of establishments reporting in each group, the number of employees covered, and the total pay rolls for one week, for both June and July, together with the per cents of change in July, are shown in the following summary:

SUMMARY OF EMPLOYMENT AND PAY-ROLL TOTALS, JUNE AND JULY, 1931

Industrial group	Estab- lish- ments	Employment		Per cent of change	Pay roll in 1 week		Per cent of change
		June, 1931	July, 1931		June, 1931	July, 1931	
1. Manufacturing-----	14,462	2,894,593	2,822,692	-1 2.5	\$66,566,782	\$62,637,578	-1 5.4
2. Coal mining-----	1,456	287,827	267,870	-6.9	5,819,971	5,185,571	-10.9
Anthracite-----	160	104,217	89,062	-14.5	2,648,925	2,133,662	-19.5
Bituminous-----	1,296	183,610	178,808	-2.6	3,171,046	3,051,909	-3.8
3. Metalliferous mining-----	306	36,773	34,430	-6.4	859,340	768,870	-10.5
4. Quarrying and nonmetallic mining-----	772	29,742	29,211	-1.8	644,358	614,941	-4.6
5. Crude petroleum producing-----	499	24,842	24,954	+0.5	890,068	840,619	-5.6
6. Public utilities-----	12,326	694,205	692,261	-0.3	21,305,670	20,988,944	-1.5
Telephone and telegraph-----	8,091	308,164	306,875	-0.4	9,108,081	8,942,866	-1.8
Power, light, and water-----	3,716	241,308	240,021	-0.5	7,605,413	7,536,043	-0.9
Electric railroad operation and maintenance, exclu- sive of car shops-----	519	144,733	145,365	+0.4	4,592,176	4,510,035	-1.8
7. Trade-----	12,627	384,815	366,440	-4.8	9,658,243	9,270,508	-4.0
Wholesale-----	2,353	69,787	69,558	-0.3	2,140,712	2,119,676	-1.0
Retail-----	10,274	315,028	296,882	-5.8	7,517,531	7,150,832	-4.9
8. Hotels-----	2,065	141,030	143,735	+1.9	2,258,355	2,253,436	-0.2
9. Canning and preserving-----	878	43,277	62,634	+44.7	644,928	816,234	+26.6
10. Laundries-----	453	38,657	39,015	+0.9	720,447	722,341	+0.3
11. Dyeing and cleaning-----	214	8,313	8,279	-0.4	187,721	181,595	-3.3
Total-----	46,058	4,584,074	4,491,521	-2.0	109,555,883	104,280,547	-4.8

RECAPITULATION BY GEOGRAPHIC DIVISIONS

GEOGRAPHIC DIVISION ¹							
New England-----	6,533	502,097	498,251	-0.8	\$11,724,304	\$11,539,228	-1.6
Middle Atlantic-----	7,394	1,340,563	1,302,423	-2.8	33,724,200	32,128,966	-4.7
East North Central-----	9,953	1,258,114	1,221,532	-2.9	31,717,549	29,327,516	-7.5
West North Central-----	4,728	290,455	287,693	-1.0	7,018,045	6,851,699	-2.4
South Atlantic-----	4,659	480,630	473,627	-1.5	9,076,616	8,761,064	-3.5
East South Central-----	2,336	189,318	187,093	-1.2	3,226,785	3,086,663	-4.3
West South Central-----	3,278	170,656	166,509	-2.4	3,955,769	3,829,247	-3.2
Mountain-----	1,614	82,078	82,171	+0.1	2,063,285	1,987,563	-3.7
Pacific-----	5,563	270,163	272,222	+0.8	7,049,330	6,768,601	-4.0
All divisions-----	46,058	4,584,074	4,491,521	-2.0	109,555,883	104,280,547	-4.8

¹ Weighted per cent of change for the combined 54 manufacturing industries, repeated from Table 2, p. 212, the remaining per cents of change, including total, are unweighted.

² Cash payments only; see note 3, p. 225.

³ *New England:* Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont. *Middle Atlantic:* New Jersey, New York, Pennsylvania. *East North Central:* Illinois, Indiana, Michigan, Ohio, Wisconsin. *West North Central:* Iowa, Kansas, Minnesota, Missouri, Nebraska, North Dakota, South Dakota. *South Atlantic:* Delaware, District of Columbia, Florida, Georgia, Maryland, North Carolina, South Carolina, Virginia, West Virginia. *East South Central:* Alabama, Kentucky, Mississippi, Tennessee. *West South Central:* Arkansas, Louisiana, Oklahoma, Texas. *Mountain:* Arizona, Colorado, Idaho, Montana, New Mexico, Nevada, Utah, Wyoming. *Pacific:* California, Oregon, Washington.

The per cents of change shown for the total figures represent only the changes in the establishments reporting, as the figures for the several industrial groups are not weighted according to the relative importance of each group.

Inventory taking and repairs in many manufacturing plants over an extended Fourth of July holiday period, together with a curtailment in retail-trade and coal-mining operations at this season of the year, cause a seasonal decrease in employment in July and an even more pronounced decrease in pay-roll totals.

Increased employment in July was shown in 5 of the 15 industrial groups: Crude petroleum producing, 0.5 per cent; electric-railroad operation, 0.4 per cent; hotels, 1.9 per cent; canning and preserving, 44.7 per cent; and laundries, 0.9 per cent.

Decreased employment was shown in the remaining 10 industrial groups: Manufacturing, 2.5 per cent; anthracite mining, 14.5 per cent; bituminous coal mining, 2.6 per cent; metalliferous mining, 6.4 per cent; quarrying and nonmetallic mining, 1.8 per cent; telephone and telegraph, 0.4 per cent; power, light, and water, 0.5 per cent; wholesale trade, 0.3 per cent; retail trade, 5.8 per cent; and dyeing and cleaning, 0.4 per cent.

Increased earnings in July as compared with June were reported in only 2 of the 15 industrial classifications; canning and preserving reported a seasonal increase of 26.6 per cent, and laundries showed a gain of 0.3 per cent in pay-roll totals. The remaining 13 groups reported decreased pay rolls over the month interval, anthracite mining showing the greatest loss, 19.5 per cent.

Decreased employment and earnings were shown in each of the nine geographic divisions, with the exception of the Mountain and Pacific divisions, which reported small increases in employment combined with decreased pay-roll totals. The greatest losses in both items were shown in the East North Central division, which reported a decrease of 2.9 per cent in number of employees, coupled with a decline of 7.5 per cent in earnings; these decreases were due largely to the falling off in employment and earnings reported in the automobile manufacturing industry.

PER CAPITA WEEKLY EARNINGS IN JULY, 1931, AND COMPARISON WITH JUNE, 1931, AND JULY, 1930

Industrial group	Per capita weekly earnings in July, 1931	Per cent of change, July, 1931, compared with—	
		June, 1931	July, 1930
1. Manufacturing.....	\$22.11	-3.1	-9.8
2. Coal mining:			
Anthracite.....	23.96	-5.8	-10.0
Bituminous.....	17.07	-1.2	-15.7
3. Metalliferous mining.....	22.33	-4.3	-17.7
4. Quarrying and nonmetallic mining.....	21.05	-2.9	-15.1
5. Crude petroleum producing.....	33.69	-6.0	-7.8
6. Public utilities:			
Telephone and telegraph.....	29.14	-1.5	+1.0
Power, light, and water.....	31.40	-0.4	-0.1
Electric railroads.....	31.03	-2.1	-3.0
7. Trade:			
Wholesale.....	30.47	-0.6	-4.0
Retail.....	24.09	+1.0	-3.6
8. Hotels (cash payments only) ¹	15.68	-2.0	-7.3
9. Canning and preserving.....	13.03	-12.5	-18.6
10. Laundries.....	18.51	-0.7	(?)
11. Dyeing and cleaning.....	21.93	-2.9	(?)
Total.....	23.22	-2.8	(?)

¹ The additional value of board, room, and tips can not be computed.

² Data not available.

Per capita earnings for July, 1931, given in the preceding table must not be confused with full-time weekly rates of wages; they are actual per capita weekly earnings computed by dividing the total number of employees reported into the total amount of pay roll in the week reported, and the "number of employees" includes all persons who worked any part of the period reported—that is, part-time workers as well as full-time workers.

Comparisons are made with per capita earnings in June, 1931, and with July, 1930, where data are available.

For convenient reference the latest data available relating to all employees, excluding executives and officials, on Class I railroads, drawn from Interstate Commerce Commission reports, are shown in the following statement. These reports are for the months of May and June, instead of for June and July, 1931, consequently the figures can not be combined with those presented in the summary table.

EMPLOYMENT AND PAY-ROLL TOTALS, CLASS I RAILROADS

Industry	Number on pay roll		Per cent of change	Amount of pay roll in entire month		Per cent of change
	May 15, 1931	June 15, 1931		May, 1931	June, 1931	
Class I railroads.....	1, 321, 683	1, 301, 902	-1.5	\$179, 131, 761	\$175, 321, 519	-2.1

The total number of employees included in this summary is 5,793,423 whose combined earnings in one week amounted to approximately \$145,000,000.

1. Employment in Selected Manufacturing Industries in July, 1931

Comparison of Employment and Pay-roll Totals in Manufacturing Industries, June and July, 1931

EMPLOYMENT in manufacturing industries in July, 1931, decreased 2.5 per cent as compared with June, and pay-roll totals decreased 5.4 per cent.

These changes are based upon returns from 13,460 identical establishments in 54 of the principal manufacturing industries in the United States, having in July 2,684,421 employees whose combined earnings in one week were \$59,354,085.

The bureau's weighted index of employment for July, 1931, is 70.4, as compared with 72.2 for June, 1931, 74.1 for May, 1931, and 81.6 for July, 1930; the index of pay-roll totals for July, 1931, is 59.1, as compared with 62.5 for June, 1931, 66.6 for May, 1931, and 75.9 for July, 1930.

Decreases in employment and earnings have been reported regularly in manufacturing industries in July of each of the nine years for which the bureau's records are available. These seasonal decreases are due largely to the usual July closing for inventory taking and repairs, together with the July 4 holiday period and the beginning of the regular vacation season.

Increased employment and earnings were reported in only 1 of the 12 groups of manufacturing industries on which the bureau's indexes of employment and pay roll are based; the leather group reported an increase of 6.1 per cent in employment and an increase of 8.8 per cent in pay-roll totals. The remaining 11 groups reported decreased employment ranging from 0.5 per cent in the tobacco-products group to 5.7 per cent in the stone-clay-glass group. An additional group of 10 manufacturing industries, surveyed but not yet included in the bureau's indexes of employment and pay-roll totals, will be found at the end of Table 1. The per cents of change for this group have not been computed, for the reason that the industries included are not weighted according to their relative importance in the group, and the trend shown by the group totals reflects, therefore, the changes occurring in the establishments reporting.

Employment increased in July in 18 of the 64 manufacturing industries now included in the bureau's monthly employment survey, and pay-roll totals increased in 14 industries. The greatest increases in employment over the month interval were largely seasonal and were reported in the following industries: Beet sugar, 15.1 per cent; radio, 10.3 per cent; boots and shoes, 6.9 per cent; flour, 6.1 per cent; woolen and worsted goods, 4.8 per cent; beverages, 4.7 per cent; ice cream, 4.6 per cent; cane-sugar refining, 4.3 per cent; and men's clothing, 4.1 per cent.

The greatest decrease in employment in July was shown in the agricultural-implement industry, which reported a falling off of 19.8 per cent. The aircraft industry reported a drop of 13.7 per cent in number of employees, and the women's clothing and the stove industries reported decreases of over 12 per cent each. Confectionery showed a seasonal loss in employment of 10.5 per cent; the glass industry decreased 9.2 per cent; and the pottery industry declined 8 per cent in number of employees in July as compared with June.

Employment in the automobile industry decreased 7.4 per cent, foundry and machine-shop products showed a falling off of 5 per cent in employment, the iron and steel industry reported 1.4 per cent fewer employees, and the cotton-goods industry decreased 1.1 per cent over the month interval.

The Mountain division was the only geographic division in which decreased employment was not reported in July, employment in this district showing an increase of less than one-tenth of 1 per cent, coupled with a slight increase in earnings. The remaining 8 geographic divisions reported both decreased employment and pay-roll totals, the South Atlantic division reporting the smallest decrease in number of employees (0.9 per cent) and the East North Central division reporting the greatest loss (4.3 per cent).

TABLE 1.—COMPARISON OF EMPLOYMENT AND PAY-ROLL TOTALS IN IDENTICAL MANUFACTURING ESTABLISHMENTS IN JUNE AND JULY, 1931, BY INDUSTRIES

Industry	Estab- lish- ments	Number on pay roll		Per cent of change	Amount of pay roll (1 week)		Per cent of change
		June, 1931	July, 1931		June, 1931	July, 1931	
Food and kindred products	1,925	216,134	213,920	(1)	\$5,413,973	\$5,312,222	(1)
Slaughtering and meat packing	202	82,671	81,624	-1.3	2,122,338	2,085,781	-1.7
Confectionery	318	33,077	29,592	-10.5	584,826	481,818	-17.6
Ice cream	315	14,021	14,668	+4.6	455,598	473,185	+3.9
Flour	380	14,857	15,768	+6.1	367,973	391,542	+6.4
Baking	698	64,662	65,130	+0.7	1,683,074	1,667,022	-1.0
Sugar refining, cane	12	6,846	7,138	+4.3	200,164	212,874	+6.3
Textiles and their products	2,373	546,544	538,218	(1)	9,280,845	9,077,371	(1)
Cotton goods	492	189,066	186,910	-1.1	2,620,690	2,532,236	-3.4
Hosiery and knit goods	340	87,042	84,887	-2.5	1,428,030	1,269,774	-11.1
Silk goods	249	45,651	43,078	-5.6	811,491	776,927	-4.3
Woolen and worsted goods	196	56,940	59,679	+4.8	1,164,212	1,228,815	+5.5
Carpets and rugs	30	18,397	17,945	-2.5	394,028	378,002	-4.1
Dyeing and finishing textiles	127	34,531	33,227	-3.8	768,515	742,770	-3.3
Clothing, men's	324	56,382	58,688	+4.1	1,026,356	1,147,350	+11.8
Shirts and collars	110	17,239	16,932	-1.8	226,704	232,801	+2.7
Clothing, women's	380	28,512	24,882	-12.7	592,429	542,988	-8.3
Millinery and lace goods	125	12,784	11,990	-6.2	248,390	225,708	-9.1
Iron and steel and their products	1,921	505,777	488,953	(1)	11,455,547	10,438,059	(1)
Iron and steel	191	202,961	200,220	-1.4	4,618,299	4,127,714	-10.6
Cast-iron pipe	42	9,047	8,858	-2.1	172,896	173,072	+0.1
Structural-iron work	166	22,104	22,322	+1.0	539,819	561,077	+3.9
Foundry and machine-shop products	1,046	183,863	174,720	-5.0	4,247,181	3,831,182	-9.8
Hardware	94	25,931	25,037	-3.4	491,291	446,105	-9.2
Machine tools	148	21,186	19,832	-6.4	507,548	492,400	-3.0
Steam fittings and steam apparatus	104	23,735	23,123	-2.6	510,826	491,747	-3.7
Stoves	130	16,950	14,841	-12.4	367,687	314,762	-14.4
Lumber and its products	1,396	160,321	154,458	(1)	2,857,537	2,672,811	(1)
Lumber, sawmills	633	87,603	83,765	-4.4	1,485,357	1,371,677	-7.7
Lumber, millwork	321	23,012	22,516	-2.2	479,213	452,218	-5.6
Furniture	442	49,706	48,177	-3.1	892,967	848,916	-4.9
Leather and its products	418	124,312	131,801	(1)	2,404,212	2,615,624	(1)
Leather	147	24,503	25,096	+2.4	578,521	587,397	+1.5
Boots and shoes	271	99,809	106,705	+6.9	1,825,691	2,028,227	+11.1
Paper and printing	1,692	231,256	229,496	(1)	7,034,921	6,808,194	(1)
Paper and pulp	367	76,827	76,911	+0.1	1,777,889	1,701,581	-4.3
Paper boxes	302	23,126	22,985	-1.0	500,738	482,704	-3.6
Printing, book and job	592	54,553	54,163	-0.7	1,779,258	1,733,822	-2.6
Printing, newspapers	431	76,750	75,527	-1.6	2,977,036	2,890,087	-2.9
Chemicals and allied products	457	86,423	85,194	(1)	2,448,234	2,408,849	(1)
Chemicals	159	34,238	34,506	+0.8	916,356	910,998	-0.6
Fertilizers	205	6,664	6,187	-7.2	119,742	110,236	-7.9
Petroleum refining	93	45,521	44,501	-2.2	1,412,136	1,387,615	-1.7
Stone, clay, and glass products	1,109	110,022	103,558	(1)	2,403,399	2,148,406	(1)
Cement	107	19,220	19,309	+0.5	521,439	485,766	-6.8
Brick, tile, and terra cotta	703	30,405	29,225	-3.9	556,299	507,583	-8.8
Pottery	113	16,752	15,405	-8.0	323,434	270,626	-16.3
Glass	186	43,645	39,619	-9.2	1,002,227	884,431	-11.8
Metal products, other than iron and steel	240	46,261	45,270	(1)	1,005,983	922,005	(1)
Stamped and enameled ware	80	17,009	16,590	-2.5	350,193	314,284	-10.3
Brass, bronze, and copper products	160	29,252	28,680	-2.0	655,790	607,721	-7.3
Tobacco products	209	56,575	56,255	(1)	845,810	832,725	(1)
Chewing and smoking tobacco and snuff	27	8,270	8,160	-1.3	129,057	128,430	-0.5
Cigars and cigarettes	182	48,305	48,095	-0.4	716,753	704,295	-1.7

See footnotes at end of table.

TABLE 1.—COMPARISON OF EMPLOYMENT AND PAY-ROLL TOTALS IN IDENTICAL MANUFACTURING ESTABLISHMENTS IN JUNE AND JULY, 1931, BY INDUSTRIES—Continued

Industry	Establishments	Number on pay roll		Per cent of change	Amount of pay roll (1 week)		Per cent of change
		June, 1931	July, 1931		June, 1931	July, 1931	
Vehicles for land transportation	1,236	405,080	380,104	(1)	\$10,963,562	\$9,651,056	(1)
Automobiles.....	209	283,270	262,430	-7.4	7,539,650	6,467,946	-14.2
Carriages and wagons.....	48	724	743	+2.6	15,738	15,295	-2.8
Car building and repairing, electric-railroad.....	440	27,678	26,849	-3.0	830,455	790,118	-4.9
Car building and repairing, steam-railroad.....	539	93,408	90,082	-3.6	2,577,719	2,377,697	-7.8
Miscellaneous industries	484	267,272	257,194	(1)	7,001,032	6,466,763	(1)
Agricultural implements.....	77	11,208	8,984	-19.8	226,096	194,708	-13.9
Electrical machinery, apparatus, and supplies.....	213	153,198	148,234	-3.2	4,032,397	3,807,555	-5.6
Pianos and organs.....	59	3,879	3,550	-8.5	90,526	76,320	-15.7
Rubber boots and shoes.....	8	12,151	12,296	+1.2	205,402	218,476	+6.4
Automobile tires and inner tubes.....	38	50,999	49,492	-3.0	1,486,384	1,271,521	-14.5
Shipbuilding.....	89	35,837	34,638	-3.3	960,227	898,183	-6.5
Total—54 industries used in computing index numbers of employment and pay roll	13,460	2,755,977	2,684,421	(1)	63,115,055	59,354,085	(1)
Industries added since February, 1929, for which data for the index-base year (1926) are not available	1,002	138,616	138,271	(1)	3,451,727	3,283,493	(1)
Rayon.....	18	23,684	23,983	+1.3	479,085	476,925	-0.4
Radio.....	50	20,773	22,908	+10.3	504,515	521,037	+3.3
Aircraft.....	37	8,101	6,988	-13.7	267,106	220,067	-17.6
Jewelry.....	151	12,348	12,123	-1.8	265,454	221,465	-16.6
Paint and varnish.....	292	16,457	15,547	-5.5	450,353	413,011	-8.3
Rubber goods, other than boots, shoes, tires, and inner tubes.....	81	16,031	15,789	-1.5	346,594	337,625	-2.6
Beet sugar.....	53	2,724	3,136	+15.1	84,821	91,040	+7.3
Beverages.....	258	12,416	13,000	+4.7	376,050	405,166	+7.7
Cash registers, adding machines, and calculating machines.....	46	16,193	15,378	-5.0	464,618	406,070	-12.6
Typewriters and supplies.....	16	9,889	9,419	-4.8	213,131	191,027	-10.4
All industries	14,462	2,894,593	2,822,692	(2)	66,566,782	62,637,578	(2)

RECAPITULATION BY GEOGRAPHIC DIVISIONS

GEOGRAPHIC DIVISIONS ³							
New England.....	1,641	350,719	346,123	-1.3	\$7,494,446	\$7,312,484	-2.4
Middle Atlantic.....	3,630	825,577	809,018	-2.0	20,036,509	19,169,037	-4.3
East North Central.....	3,546	922,321	882,911	-4.3	22,860,765	20,679,960	-9.5
West North Central.....	1,312	153,792	151,687	-1.4	3,685,928	3,560,281	-3.4
South Atlantic.....	1,750	327,013	324,089	-0.9	5,691,127	5,457,286	-4.1
East South Central.....	675	105,355	104,338	-1.0	1,768,191	1,680,770	-4.9
West South Central.....	789	80,182	76,983	-4.0	1,722,272	1,641,971	-4.7
Mountain.....	284	26,569	26,583	+	672,766	673,745	+0.1
Pacific.....	835	103,065	100,960	-2.0	2,634,778	2,462,044	-6.6
All divisions	14,462	2,894,593	2,822,692	(2)	66,566,782	62,637,578	(2)

¹ The per cent of change has not been computed for the reason that the figures in the preceding columns are unweighted and refer only to the establishments reporting; for the weighted per cent of change, wherein proper allowance is made for the relative importance of the several industries, so that the figures may represent all establishments of the country in the industries here represented, see Table 2.

² The per cent of change has not been computed for the reason that the figures in the preceding columns are unweighted and refer only to the establishments reporting.

³ See footnote 3, p. 206.

⁴ Less than one-tenth of 1 per cent.

TABLE 2.—PER CENT OF CHANGE, JUNE TO JULY, 1931, 12 GROUPS OF MANUFACTURING INDUSTRIES AND TOTAL OF 54 INDUSTRIES

[Computed from the index numbers of each group, which are obtained by weighting the index numbers of the several industries of the group, by the number of employees, or wages paid, in the industries]

Group	Per cent of change June to July, 1931		Group	Per cent of change, June to July, 1931	
	Num- ber on payroll	Amount of pay- roll		Num- ber on payroll	Amount of pay- roll
Food and kindred products.....	-0.6	-1.5	Stone, clay, and glass products..	-5.7	-10.8
Textiles and their products.....	-1.8	-2.0	Metal products, other than iron and steel.....	-2.2	-8.1
Iron and steel and their prod- ucts.....	-3.4	-9.0	Tobacco products.....	-0.5	-1.7
Lumber and its products.....	-3.9	-6.4	Vehicles for land transportation..	-5.4	-11.0
Leather and its products.....	+6.1	+8.8	Miscellaneous industries.....	-3.8	-7.6
Paper and printing.....	-0.8	-3.1			
Chemicals and allied products..	-1.1	-1.5	Total: 54 industries.....	-2.5	-5.4

Comparison of Employment and Pay-roll Totals in Manufacturing Industries, July, 1931, with July, 1930

EMPLOYMENT in manufacturing industries in July, 1931, was 13.7 per cent below the level of July, 1930, and pay-roll totals were 22.1 per cent lower.

Decreased employment and earnings were shown in each of the 12 groups of manufacturing industries. The textile group reported the smallest loss in employment and earnings over the 12-month interval, a decrease of 1.9 per cent in number of employees and 4.6 per cent in pay-roll totals. The lumber group showed the greatest loss in employment over the year period (23.6 per cent), while the iron and steel group of industries showed the greatest falling off in earnings (36.5 per cent).

Of the 54 industries on which the bureau's general indexes of employment and pay roll are based, three industries only—cotton goods, woolen and worsted goods, and carpets and rugs—had more employees at the end of the 12-month period than they had at the beginning. These three industries, together with the dyeing and finishing industry, reported increased pay-roll totals over the corresponding month of the previous year. The remaining industries reported both decreased employment and earnings over the year interval. The greatest decrease in both items was shown in the agricultural implement industry, in which employment was 55.7 per cent below the level of July, 1930, and pay-roll totals were 56.7 per cent lower.

Decreases in employment ranging from 31.9 per cent to 37 per cent were shown in the fertilizer, machine tool, carriage and wagon, and piano industries. The structural-iron work, foundry and machine-shop products, stove, sawmill, petroleum refining, steam-railroad car building and repairing, and brick industries reported losses in employment ranging from 21.4 to 27.6 per cent. Employment in the automobile and the iron and steel industries was 17 per cent and 16.9 per cent, respectively, below the level of the corresponding month of 1930.

With but one exception (dyeing and finishing textiles), those industries in which decreased employment was reported over the year interval showed even more pronounced losses in pay-roll totals.

Each of the nine geographic divisions reported decreased employment and pay-roll totals in this year-to-year comparison, the decreases in employment ranging from 6.7 per cent in the New England division to 20.4 per cent in the West South Central division. With the exception of the Mountain division, the decreases in earnings in the several divisions were greater than the losses in employment.

TABLE 3.—COMPARISON OF EMPLOYMENT AND PAY-ROLL TOTALS IN MANUFACTURING INDUSTRIES, JULY, 1931, WITH JULY, 1930

[The per cents of change for each of the 12 groups of industries and for the total of all industries are weighted in the same manner as are the per cents of change in Table 2]

Industry	Per cent of change July, 1931, com- pared with July, 1930		Industry	Per cent of change July, 1931, com- pared with July, 1930	
	Num- ber on pay roll	Amount of pay roll		Num- ber on pay roll	Amount of pay roll
Food and kindred products	-7.5	-12.0	Paper and printing—contd.		
Slaughtering and meat packing	-8.0	-11.1	Printing, book and job	-12.2	-17.0
Confectionery	-9.7	-18.9	Printing, newspapers	-3.1	-4.6
Ice cream	-8.1	-11.4	Chemicals and allied prod- ucts		
Flour	-7.4	-12.9	Chemicals	-16.6	-19.3
Baking	-5.7	-11.0	Fertilizers	-7.8	-10.2
Sugar refining, cane	-15.6	-16.2	Petroleum refining	-37.0	-42.7
Textiles and their products	-1.9	-4.6		-21.7	-24.2
Cotton goods	+0.4	+1.5	Stone, clay, and glass prod- ucts		
Hosiery and knit goods	-1.2	-9.0		-15.9	-25.9
Silk goods	-19.1	-17.9	Cement	-19.7	-27.1
Woolen and worsted goods	+9.6	+8.1	Brick, tile, and terra cotta	-24.5	-39.8
Carpets and rugs	+9.5	+19.4	Pottery	-6.0	-21.3
Dyeing and finishing tex- tiles	-1.8	+1.2	Glass	-7.6	-10.2
Clothing, men's	-4.3	-11.5	Metal products, other than iron and steel		
Shirts and collars	-6.2	-8.9	Stamped and enameled ware	-13.5	-22.8
Clothing, women's	-4.9	-12.8	Brass, bronze, and copper products	-8.4	-14.3
Millinery and lace goods	-3.1	-7.1		-16.0	-26.0
Iron and steel and their products	-22.5	-36.5	Tobacco products	-9.9	-17.6
Iron and steel	-16.9	-35.1	Chewing and smoking to- bacco and snuff	-6.8	-9.4
Cast-iron pipe	-17.5	-28.1	Cigars and cigarettes	-10.3	-18.5
Structural-iron work	-24.8	-31.1	Vehicles for land transpor- tation		
Foundry and machine-shop products	-27.4	-40.0	Automobiles	-19.7	-26.6
Hardware	-15.4	-27.7	Carriages and wagons	-17.0	-26.4
Machine tools	-36.1	-41.5	Car building and repairing, electric-railroad	-32.9	-39.1
Steam fittings and steam and hot-water heating apparatus	-11.9	-27.4	Car building and repairing, steam-railroad	-14.2	-18.0
Stoves	-21.4	-29.5		-23.1	-27.5
Lumber and its products	-23.6	-33.8	Miscellaneous industries	-19.0	-28.2
Lumber, sawmills	-27.6	-40.2	Agricultural implements	-55.7	-56.7
Lumber, millwork	-16.5	-25.0	Electrical machinery, ap- paratus, and supplies	-18.6	-28.6
Furniture	-17.3	-25.7	Pianos and organs	-31.9	-45.2
Leather and its products	-2.5	-7.6	Rubber boots and shoes	-7.5	-21.7
Leather	-6.2	-9.7	Automobile tires	-11.2	-20.6
Boots and shoes	-1.5	-7.0	Shipbuilding	-15.9	-25.9
Paper and printing	-8.3	-12.7	All industries	-13.7	-22.1
Paper and pulp	-9.8	-18.9			
Paper boxes	-8.4	-14.9			

RECAPITULATION BY GEOGRAPHIC DIVISIONS

GEOGRAPHIC DIVISION			GEOGRAPHIC DIVISION—contd.		
New England	-6.7	-13.9	West South Central	-20.4	-27.2
Middle Atlantic	-14.4	-23.9	Mountain	-17.6	-13.5
East North Central	-17.2	-26.2	Pacific	-16.4	-24.0
West North Central	-14.1	-17.8	All divisions	-13.7	-22.1
South Atlantic	-8.5	-15.3			
East South Central	-11.1	-18.3			

Per Capita Earnings in Manufacturing Industries

ACTUAL per capita weekly earnings in July, 1931, for each of the 64 manufacturing industries surveyed by the Bureau of Labor Statistics, together with per cents of change in July, 1931, as compared with June, 1931, and July, 1930, are shown in Table 4.

Per capita earnings in July, 1931, for the combined 54 chief manufacturing industries of the United States, upon which the bureau's indexes of employment and pay rolls are based, were 3.1 per cent less than in June, 1931, and 9.8 per cent less than July, 1930.

The actual average per capita weekly earnings in July, 1931, for the 54 manufacturing industries were \$22.11; the average per capita earnings for all of the 64 manufacturing industries surveyed were \$22.19.

Per capita earnings given in Table 4 must not be confused with full-time weekly rates of wages. They are actual per capita weekly earnings, computed by dividing the total number of employees reported into the total amount of pay roll in the week reported, and the "number of employees" includes all persons who worked any part of the period reported—that is, part-time workers as well as full-time workers.

TABLE 4.—PER CAPITA WEEKLY EARNINGS IN MANUFACTURING INDUSTRIES IN JULY, 1931, AND COMPARISON WITH JUNE, 1931, AND JULY, 1930

Industry	Per capita weekly earnings in July, 1931	Per cent of change July, 1931, compared with—	
		June, 1931	July, 1930
Food and kindred products:			
Slaughtering and meat packing.....	\$25.55	-0.5	-3.4
Confectionery.....	16.28	-7.9	-10.0
Ice cream.....	32.26	-0.7	-3.6
Flour.....	24.83	+0.2	-6.2
Baking.....	25.60	-1.7	-5.7
Sugar refining, cane.....	29.82	+2.0	-0.6
Textiles and their products:			
Cotton goods.....	13.55	-2.2	+1.3
Hosiery and knit goods.....	14.96	-8.8	-7.9
Silk goods.....	18.04	+1.5	+1.2
Woolen and worsted goods.....	20.59	+0.7	-1.5
Carpets and rugs.....	21.06	-1.7	+8.6
Dyeing and finishing textiles.....	22.35	+0.4	+2.8
Clothing, men's.....	19.55	+7.4	-7.8
Shirts and collars.....	13.75	+4.6	-3.2
Clothing, women's.....	21.82	+5.0	-8.6
Millinery and lace goods.....	18.82	-3.1	-3.9
Iron and steel and their products:			
Iron and steel.....	20.62	-9.4	-21.6
Cast-iron pipe.....	19.54	+2.3	-12.6
Structural-iron work.....	25.14	+2.9	-8.6
Foundry and machine-shop products.....	21.93	-5.1	-17.4
Hardware.....	17.82	-6.0	-14.7
Machine tools.....	24.83	+3.6	-8.5
Steam fittings and steam and hot-water heating apparatus.....	21.27	-1.2	-17.6
Stoves.....	21.21	-2.2	-10.1
Lumber and its products:			
Lumber, sawmills.....	16.38	-3.4	-17.5
Lumber, millwork.....	20.08	-3.6	-10.4
Furniture.....	17.62	-1.9	-10.4
Leather and its products:			
Leather.....	23.41	-0.8	-3.9
Boots and shoes.....	19.01	+3.9	-5.5
Paper and printing:			
Paper and pulp.....	22.12	-4.4	-10.2
Paper boxes.....	21.08	-2.6	-7.0
Printing, book and job.....	32.01	-1.9	-5.4
Printing, newspapers.....	38.27	-1.3	-1.4

TABLE 4.—PER CAPITA WEEKLY EARNINGS IN MANUFACTURING INDUSTRIES IN JULY, 1931, AND COMPARISON WITH JUNE, 1931, AND JULY, 1930—Continued

Industry	Per capita weekly earnings in July, 1931	Per cent of change July, 1931, compared with—	
		June, 1931	July, 1930
Chemicals and allied products:			
Chemicals.....	\$26.40	-1.3	-2.5
Fertilizers.....	17.82	-0.8	-9.1
Petroleum, refining.....	31.18	+0.5	-3.6
Stone, clay, and glass products:			
Cement.....	25.16	-7.3	-9.1
Brick, tile, and terra cotta.....	17.37	-5.1	-20.3
Pottery.....	17.57	-9.0	-16.0
Glass.....	22.32	-2.8	-2.8
Metal products, other than iron and steel:			
Stamped and enameled ware.....	18.94	-8.0	-6.5
Brass, bronze, and copper products.....	21.19	-5.5	-12.1
Tobacco products:			
Chewing and smoking tobacco and snuff.....	15.74	+0.8	-2.6
Cigars and cigarettes.....	14.64	-1.3	-9.1
Vehicles for land transportation:			
Automobiles.....	24.65	-7.4	-11.4
Carriages and wagons.....	20.59	-5.3	-9.1
Car building and repairing, electric-railroad.....	29.43	-1.9	-4.6
Car building and repairing, steam-railroad.....	26.39	-4.4	-5.6
Miscellaneous industries:			
Agricultural implements.....	21.67	+7.4	-2.4
Electrical machinery, apparatus, and supplies.....	25.69	-2.4	-12.2
Pianos and organs.....	21.50	-7.9	-19.7
Rubber boots and shoes.....	17.77	+5.1	-15.1
Automobile tires and inner tubes.....	25.69	-11.9	-10.5
Shipbuilding.....	25.93	-3.2	-11.8
Industries added since February, 1929, for which data for the index base year (1926) are not available:			
Rayon.....	19.89	-1.7	-6.0
Radio.....	22.74	-6.4	-12.5
Aircraft.....	31.49	-4.5	+5.5
Jewelry.....	18.27	-15.0	-26.2
Paint and varnish.....	26.57	-2.9	-2.1
Rubber goods, other than boots, shoes, tires, and inner tubes.....	21.38	-1.1	-3.4
Beet sugar.....	29.03	-6.8	(1)
Beverages.....	31.17	+2.9	(1)
Cash registers, adding machines, and calculating machines.....	26.41	-7.9	(1)
Typewriters and supplies.....	20.28	-5.9	(1)

¹ Data not available.

Index Numbers of Employment and Pay-roll Totals in Manufacturing Industries

TABLE 5 shows the general index of employment in manufacturing industries and the general index of pay-roll totals, by months, from January, 1923, to July, 1931, together with the average indexes for each of the years 1923 to 1930, inclusive.

Index numbers showing relatively the variation in number of persons employed and in pay-roll totals in each of the 54 manufacturing industries upon which the bureau's general indexes are based and in each of the 12 groups of industries, and also general indexes for the combined 12 groups of industries, are shown in Table 6 for July, 1930, and May, June, and July, 1931.

In computing the general indexes and the group indexes the index numbers of separate industries are weighted according to the relative importance of the industries.

TABLE 5.—GENERAL INDEXES OF EMPLOYMENT AND PAY-ROLL TOTALS IN MANUFACTURING INDUSTRIES, JANUARY, 1923, TO JULY, 1931

[Monthly average, 1926=100]

Month	Employment									Pay-roll totals								
	1923	1924	1925	1926	1927	1928	1929	1930	1931	1923	1924	1925	1926	1927	1928	1929	1930	1931
Jan...	106.6	103.8	97.9	100.4	97.3	91.6	95.2	90.2	73.1	95.8	98.6	93.9	98.0	94.9	89.6	94.5	87.6	62.3
Feb...	108.4	105.1	99.7	101.5	99.0	93.0	97.4	90.3	74.1	99.4	103.8	99.3	102.2	100.6	93.9	101.8	90.7	67.6
Mar...	110.8	104.9	100.4	102.0	99.5	93.7	98.6	89.8	74.8	104.7	103.3	100.8	103.4	102.0	95.2	103.9	90.8	68.5
Apr...	110.8	102.8	100.2	101.0	98.6	93.3	99.1	89.1	74.5	105.7	101.1	98.3	101.5	100.8	93.8	104.6	89.8	67.4
May...	110.8	98.8	98.9	99.8	97.6	93.0	99.2	87.7	74.1	109.4	96.5	98.5	99.8	99.8	94.1	104.8	87.6	66.6
June...	110.9	95.6	98.0	99.3	97.0	93.1	98.8	85.5	72.2	109.3	90.8	95.7	99.7	97.4	94.2	102.8	84.1	62.5
July...	109.2	92.3	97.2	97.7	95.0	92.2	98.2	81.6	70.4	104.3	84.3	93.5	95.2	93.0	91.2	98.2	75.9	59.1
Aug...	108.5	92.5	97.8	98.7	95.1	93.6	98.6	79.9	---	103.7	87.2	95.4	98.7	95.0	94.2	102.1	73.9	---
Sept...	108.6	94.3	98.9	100.3	95.8	95.0	99.3	79.7	---	104.4	89.8	94.4	99.3	94.1	95.4	102.6	74.2	---
Oct...	108.1	95.6	100.4	100.7	95.3	95.9	98.3	78.6	---	106.8	92.4	100.4	102.9	95.2	99.0	102.3	72.7	---
Nov...	107.4	95.5	100.7	99.5	93.5	95.4	94.8	76.5	---	105.4	91.4	100.4	99.6	91.6	96.1	95.1	68.3	---
Dec...	105.4	97.3	100.8	98.9	92.6	95.5	91.9	75.1	---	103.2	95.7	101.6	99.8	93.2	97.7	92.0	67.4	---
Av...	108.8	98.2	99.2	100.0	96.4	93.8	97.5	83.7	73.3	104.3	94.6	97.7	100.0	96.5	94.5	100.4	80.3	64.5

¹ Average for 7 months.

Following Table 6 are two charts which represent the 54 separate industries combined and show the course of pay-roll totals as well as the course of employment for each month of the years 1926 to 1930, and January to July, 1931, inclusive.

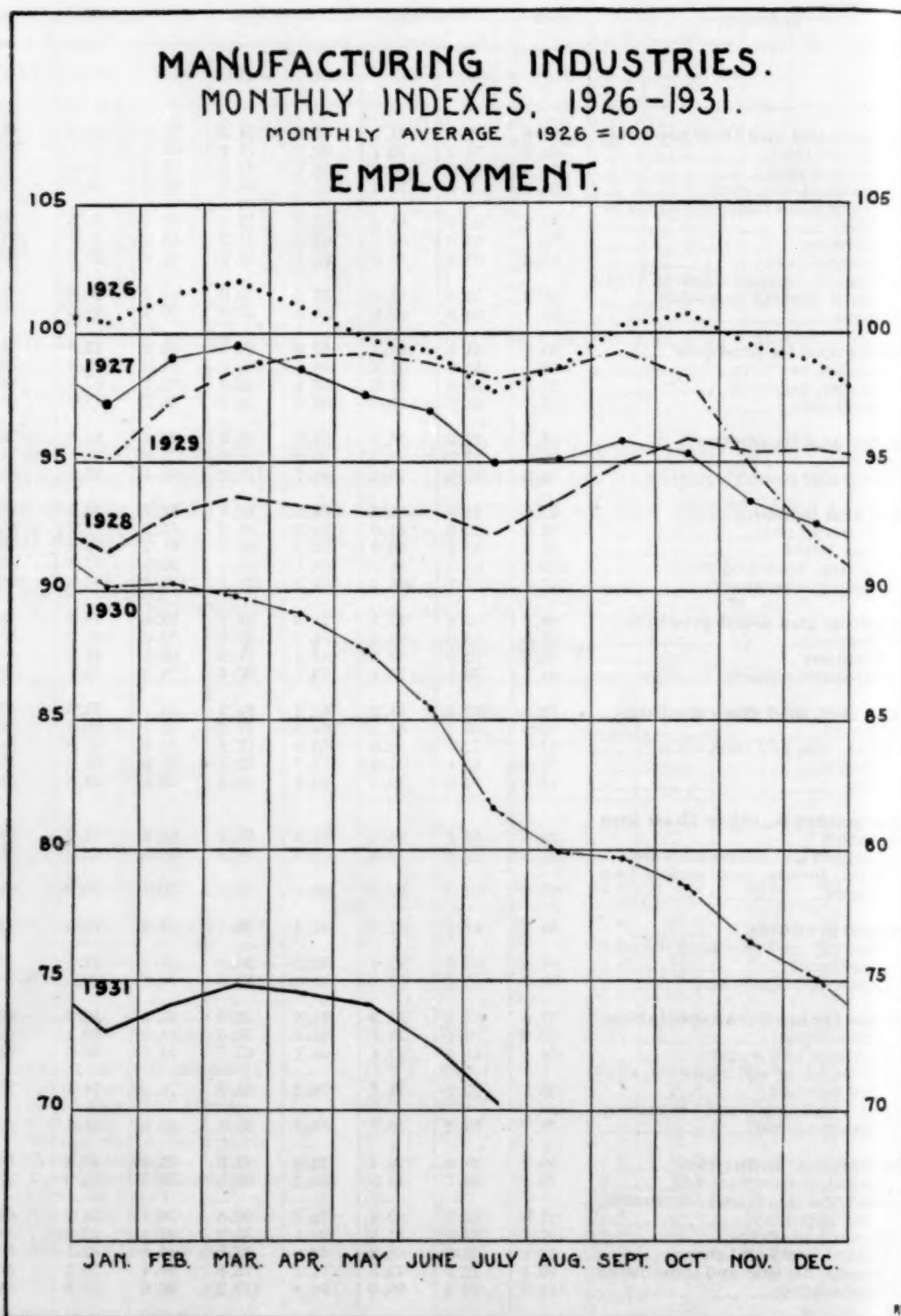
TABLE 6.—INDEXES OF EMPLOYMENT AND PAY-ROLL TOTALS IN MANUFACTURING INDUSTRIES, JULY, 1930, AND MAY, JUNE, AND JULY, 1931

[Monthly average, 1926=100]

Industry	Employment				Pay-roll totals			
	1930		1931		1930		1931	
	July		July		July		July	
	July	May	June	July	July	May	June	July
General index	81.6	74.1	72.2	70.4	75.9	66.6	62.5	58.1
Food and kindred products	91.7	83.0	88.1	87.6	97.6	87.3	87.2	84.9
Slaughtering and meat packing...	96.8	90.6	90.2	89.1	100.7	91.6	91.0	89.5
Confectionery.....	76.6	78.6	77.3	69.2	73.7	73.3	72.5	56.8
Ice cream.....	102.8	83.7	90.3	94.5	102.4	82.6	87.3	90.7
Flour.....	97.7	86.3	85.3	90.5	99.5	84.1	81.5	86.7
Baking.....	98.1	91.7	91.9	92.5	99.8	89.7	89.7	88.9
Sugar refining, cane.....	99.8	79.1	80.7	84.2	103.6	79.5	81.6	86.8
Textiles and their products	77.6	79.8	77.5	76.1	67.3	68.9	65.5	64.9
Cotton goods.....	75.9	79.1	77.0	76.2	64.8	72.6	68.1	65.9
Hosiery and knit goods.....	80.9	81.4	81.9	79.9	70.8	74.7	72.4	64.4
Silk goods.....	78.6	76.9	67.4	63.6	67.7	66.9	58.1	55.9
Woolen and worsted goods.....	77.4	77.4	80.9	84.8	72.7	72.4	74.5	78.9
Carpets and rugs.....	68.7	78.2	77.1	75.2	50.6	65.4	63.0	60.9
Dyeing and finishing textiles.....	84.2	91.2	86.0	82.7	72.8	84.7	76.2	73.9
Clothing, men's.....	79.7	72.8	73.3	76.3	70.2	50.7	55.6	62.9
Shirts and collars.....	76.1	74.9	72.7	71.4	65.2	62.7	57.8	59.9
Clothing, women's.....	77.9	93.2	84.9	74.1	65.6	72.4	62.4	57.2
Millinery and lace goods.....	70.1	76.5	72.4	67.9	55.3	60.9	56.6	51.4

TABLE 6.—INDEXES OF EMPLOYMENT AND PAY-ROLL TOTALS IN MANUFACTURING INDUSTRIES, JULY, 1930, AND MAY, JUNE, AND JULY, 1931—Continued

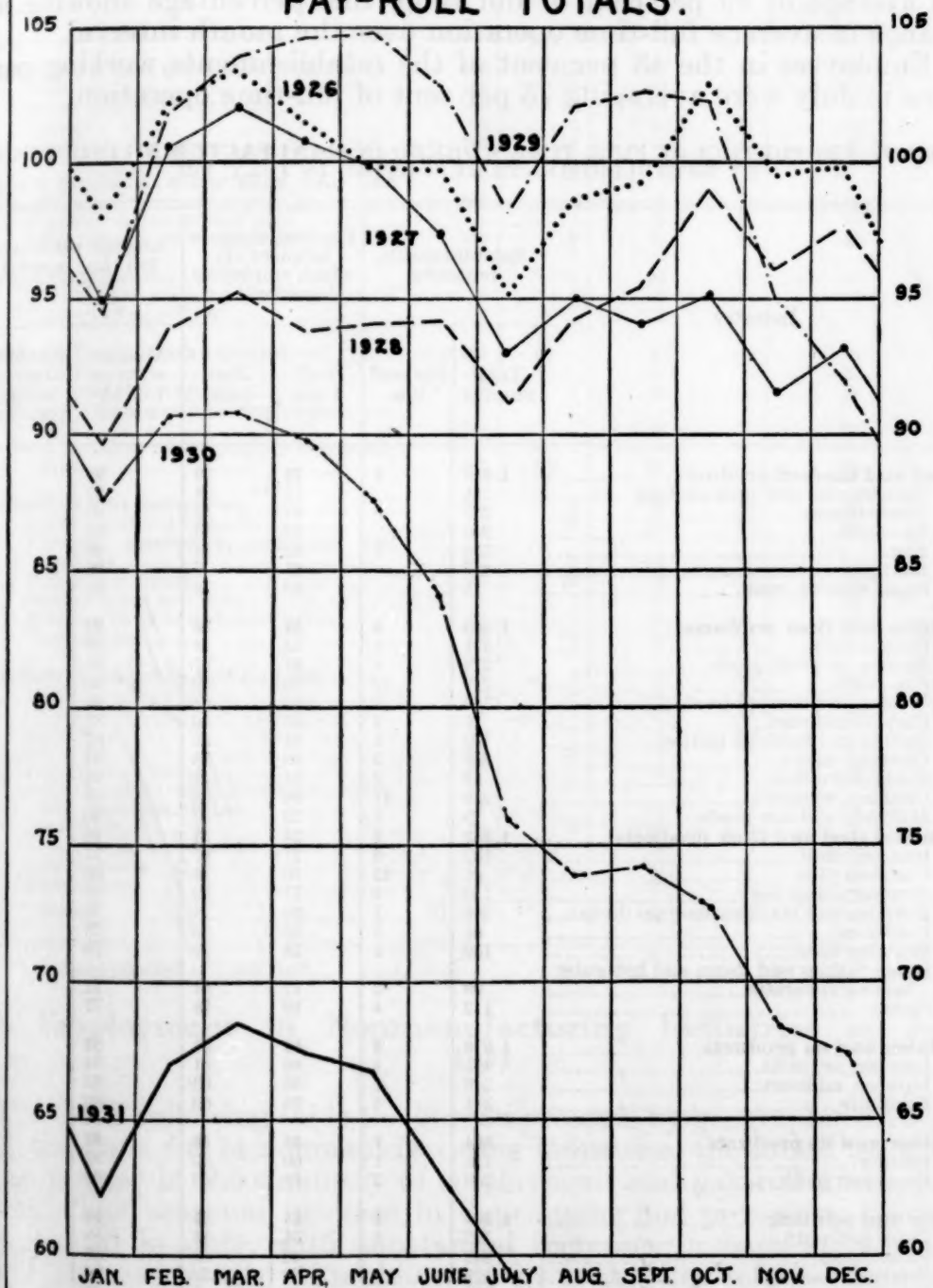
Industry	Employment				Pay-roll totals			
	1930	1931			1930	1931		
	July	May	June	July	July	May	June	July
Iron and steel and their products	84.0	70.3	67.4	65.1	74.5	57.8	52.0	47.3
Iron and steel	83.9	74.2	70.7	69.7	74.4	62.1	54.1	48.3
Cast-iron pipe	70.3	61.0	59.2	58.0	67.6	55.8	48.6	48.6
Structural-iron work	95.6	72.5	71.2	71.9	88.5	60.8	58.7	61.0
Foundry and machine-shop products	87.2	69.5	66.6	63.3	77.5	56.4	51.6	46.5
Hardware	76.1	68.0	66.7	64.4	61.3	53.2	48.8	44.3
Machine tools	95.6	68.7	65.3	61.1	84.0	54.5	50.6	49.1
Steam fittings and steam and hot-water heating apparatus	60.4	55.8	54.6	53.2	53.0	41.9	40.0	38.5
Stoves	69.7	64.8	62.6	54.8	55.9	50.3	46.0	39.4
Lumber and its products	68.1	54.6	54.1	52.0	62.1	45.0	43.9	41.1
Lumber, sawmills	68.1	51.6	51.6	49.3	64.7	41.8	41.9	38.7
Lumber, millwork	63.6	56.0	54.3	53.1	59.5	49.1	47.3	44.6
Furniture	70.7	61.5	60.4	58.5	58.7	48.7	45.8	43.6
Leather and its products	85.7	79.9	78.8	83.6	76.0	66.5	64.5	70.2
Leather	84.4	77.3	77.3	79.2	82.2	73.8	73.1	74.2
Boots and shoes	86.0	80.6	79.2	84.7	74.2	64.4	62.1	69.0
Paper and printing	97.6	92.0	90.2	89.5	99.4	92.7	89.6	86.8
Paper and pulp	89.9	82.6	81.0	81.1	84.0	75.2	71.2	68.1
Paper boxes	87.4	81.4	80.9	80.1	90.4	81.7	79.8	76.9
Printing, book and job	100.3	91.5	88.7	88.1	102.6	90.9	87.5	85.2
Printing, newspapers	107.8	107.7	106.2	104.5	109.8	110.3	107.9	104.8
Chemicals and allied products	89.3	80.6	75.3	74.5	91.8	79.8	75.2	74.1
Chemicals	91.6	85.0	83.8	84.5	89.6	82.9	81.0	80.5
Fertilizers	65.6	72.9	44.5	41.3	71.0	66.5	44.2	40.7
Petroleum refining	94.1	78.1	75.4	73.7	97.4	79.2	75.1	73.8
Stone, clay, and glass products	72.8	65.1	64.9	61.2	64.5	55.7	53.6	47.8
Cement	80.3	66.1	64.2	64.5	77.2	61.1	60.4	56.3
Brick, tile, and terra cotta	67.4	52.7	52.9	50.9	57.5	39.4	37.9	34.6
Pottery	76.3	82.1	77.9	71.7	62.1	69.0	58.5	48.9
Glass	74.8	74.0	76.1	69.1	68.3	69.0	69.5	61.3
Metal products, other than iron and steel	78.4	70.4	69.3	67.8	68.9	61.6	57.9	53.2
Stamped and enameled ware	77.3	72.3	72.6	70.8	64.9	63.9	62.0	55.6
Brass, bronze, and copper products	78.9	69.5	67.7	66.3	70.5	60.7	56.3	52.2
Tobacco products	90.2	82.7	81.7	81.3	86.7	72.3	72.6	71.4
Chewing and smoking tobacco and snuff	86.6	84.6	81.8	80.7	84.8	78.7	77.1	76.8
Cigars and cigarettes	90.7	82.4	81.7	81.4	86.9	71.5	72.0	70.8
Vehicles for land transportation	77.0	68.3	65.3	61.8	70.3	65.6	58.0	51.6
Automobiles	82.9	79.1	74.3	68.8	70.4	73.5	60.4	51.8
Carriages and wagons	56.8	41.5	37.1	38.1	63.7	42.6	40.0	38.8
Car building and repairing, electric-railroad	86.5	77.7	76.5	74.2	86.3	76.2	74.4	70.8
Car building and repairing, steam-railroad	71.1	58.2	56.7	54.7	69.1	56.9	54.4	50.1
Miscellaneous industries	90.9	78.0	76.5	73.6	87.9	72.0	68.3	63.1
Agricultural implements	79.4	49.7	43.9	35.2	63.8	36.3	32.0	27.6
Electrical machinery, apparatus, and supplies	97.9	84.3	82.4	79.7	96.5	78.1	73.0	68.9
Pianos and organs	42.7	39.1	31.8	29.1	35.2	27.4	22.9	19.3
Rubber boots and shoes	72.4	63.5	66.2	67.0	65.3	45.6	48.1	51.1
Automobile tires and inner tubes	80.1	72.5	73.3	71.1	75.8	69.4	70.5	60.2
Shipbuilding	112.7	98.2	98.0	94.8	113.3	96.6	89.8	84.0



MANUFACTURING INDUSTRIES. MONTHLY INDEXES, 1926-1931.

MONTHLY AVERAGE 1926 = 100

PAY-ROLL TOTALS.



Time Worked in Manufacturing Industries in July, 1931

REPORTS as to working time of employees in July were received from 11,641 establishments in 64 manufacturing industries. Three per cent of the establishments were idle, while employees in 54 per cent were working full time, and employees in 43 per cent were working part time.

Employees in the establishments in operation in July were working an average of 89 per cent of full time, this percentage showing no change in average full-time operation over the month interval.

Employees in the 43 per cent of the establishments working part time in July were averaging 75 per cent of full-time operation.

TABLE 7.—PROPORTION OF FULL TIME WORKED IN MANUFACTURING INDUSTRIES BY ESTABLISHMENTS REPORTING IN JULY, 1931

Industry	Establishments reporting		Per cent of establishments in which employees worked—		Average per cent of full time reported by—	
	Total number	Per cent idle	Full time	Part time	All operating establishments	Establishments operating part time
Food and kindred products	1, 610	1	79	20	96	79
Slaughtering and meat packing.....	164		76	24	97	88
Confectionery.....	237	3	43	54	86	74
Ice cream.....	250		82	18	97	84
Flour.....	335	1	82	18	96	76
Baking.....	613		91	9	98	82
Sugar refining, cane.....	11		82	18	95	75
Textiles and their products	1, 868	5	59	36	92	78
Cotton goods.....	431	4	53	43	89	76
Hosiery and knit goods.....	279	4	61	35	91	76
Silk goods.....	218	12	58	30	95	85
Woolen and worsted goods.....	169	1	66	33	94	81
Carpets and rugs.....	26	4	46	50	89	78
Dyeing and finishing textiles.....	109	1	44	55	87	76
Clothing, men's.....	246	3	69	28	94	79
Shirts and collars.....	81	2	54	43	94	87
Clothing, women's.....	230	11	66	23	93	75
Millinery and lace goods.....	79	1	52	47	90	79
Iron and steel and their products	1, 652	2	24	74	76	68
Iron and steel.....	132	6	27	67	77	68
Cast-iron pipe.....	41	12	10	78	66	62
Structural-iron work.....	150	1	37	62	87	79
Foundry and machine-shop products.....	948	1	25	74	75	67
Hardware.....	61	3	16	80	73	67
Machine tools.....	139	3	18	79	75	69
Steam fittings and steam and hot-water heating apparatus.....	99	2	17	81	71	65
Stoves.....	112	4	19	78	77	71
Lumber and its products	1, 010	3	40	57	84	77
Lumber, sawmills.....	421	4	46	51	84	79
Lumber, millwork.....	248	1	36	63	85	77
Furniture.....	341	4	36	60	82	71
Leather and its products	364	2	59	40	92	79
Leather.....	115	1	60	39	92	79
Boots and shoes.....	249	2	58	40	92	79
Paper and printing	1, 368	1	65	34	93	81
Paper and pulp.....	192	4	54	43	89	74
Paper boxes.....	242	(1)	40	59	87	79
Printing, book and job.....	516		62	38	94	80
Printing, newspapers.....	358		93	7	99	91
Chemicals and allied products	379	3	63	34	92	78
Chemicals.....	135	1	60	39	93	80
Fertilizers.....	178	6	52	42	89	76
Petroleum refining.....	66		95	5	90	88

1 Less than one-half of 1 per cent.

TABLE 7.—PROPORTION OF FULL TIME WORKED IN MANUFACTURING INDUSTRIES BY ESTABLISHMENTS REPORTING IN JULY, 1931—Continued

Industry	Establishments reporting		Per cent of establishments in which employees worked—		Average per cent of full time reported by—	
	Total number	Per cent idle	Full time	Part time	All operating establishments	Establishments operating part time
Stone, clay, and glass products	690	11	57	32	90	71
Cement.....	82	10	80	10	98	81
Brick, tile, and terra cotta.....	380	12	50	39	88	72
Pottery.....	99	5	44	51	82	66
Glass.....	129	14	74	12	96	72
Metal products, other than iron and steel	204	(1)	34	65	84	75
Stamped and enameled ware.....	64	-----	39	61	87	79
Brass, bronze, and copper products.....	140	1	32	67	82	74
Tobacco products	193	3	34	64	87	80
Chewing and smoking tobacco and snuff.....	25	4	48	48	90	80
Cigars and cigarettes.....	168	2	32	66	87	80
Vehicles for land transportation	1,085	(1)	51	49	89	79
Automobiles.....	161	-----	30	70	80	70
Carriages and wagons.....	41	5	49	46	90	79
Car building and repairing, electric-rail-road.....	396	-----	80	20	97	87
Car building and repairing, steam-rail-road.....	487	(1)	33	66	86	79
Miscellaneous industries	405	3	34	63	85	76
Agricultural implements.....	70	4	33	63	83	74
Electrical machinery, apparatus, and supplies.....	175	1	19	81	81	77
Pianos and organs.....	45	18	18	64	75	68
Rubber boots and shoes.....	7	-----	43	57	86	76
Automobile tires and inner tubes.....	27	-----	59	41	94	85
Shipbuilding.....	81	2	65	32	95	85
Industries added in 1929 and 1930	843	1	70	29	94	79
Radio.....	45	4	58	38	95	87
Rayon.....	15	-----	67	33	92	77
Aircraft.....	34	3	82	15	97	80
Jewelry.....	121	2	31	66	82	73
Paint and varnish.....	257	(1)	68	32	94	82
Rubber goods, other than boots, shoes, tires, and inner tubes.....	71	-----	52	48	90	80
Beet sugar.....	46	2	91	7	98	77
Beverages.....	216	(1)	94	5	100	82
Cash registers.....	32	-----	84	16	98	84
Typewriters.....	6	-----	67	33	88	64
Total	11,641	3	54	43	89	75

¹ Less than one-half of 1 per cent.

2. Employment in Nonmanufacturing Industries in July, 1931

IN THE following table the bureau presents by geographic divisions the data for 14 nonmanufacturing industries, the totals for which also appear in the summary of employment and pay-roll totals, page 206. The seasonal increase in the canning and preserving industry continued in July, with substantial increases in both employment and pay-roll totals. Employment in anthracite mining showed a decrease of 14.5 per cent, metalliferous mining, 6.4 per cent, retail trade, 5.8 per cent, and bituminous coal mining, 2.6 per cent. The remaining groups reported fluctuations in employment of less than 2 per cent.

TABLE 1.—COMPARISON OF EMPLOYMENT AND PAY-ROLL TOTALS IN IDENTICAL NONMANUFACTURING ESTABLISHMENTS IN JUNE AND JULY, 1931, BY INDUSTRIES

Geographic division	Estab- lish- ments	Number on pay roll		Per cent of change	Amount of pay roll (1 week)		Per cent of change
		June, 1931	July, 1931		June, 1931	July, 1931	
ANTHRACITE MINING							
Middle Atlantic.....	160	104, 217	89, 062	-14. 5	\$2, 678, 925	\$2, 133, 662	-19. 5
BITUMINOUS COAL MINING							
Middle Atlantic.....	372	53, 118	51, 927	-2. 2	\$873, 898	\$867, 251	-0. 8
East North Central.....	164	24, 328	24, 992	+2. 7	467, 487	442, 178	-5. 4
West North Central.....	47	3, 364	3, 573	+6. 2	62, 846	63, 346	+0. 8
South Atlantic.....	332	49, 153	46, 236	-5. 9	867, 223	850, 307	-2. 0
East South Central.....	226	38, 907	38, 416	-1. 3	569, 211	540, 944	-5. 0
West South Central.....	27	1, 899	1, 731	-8. 8	28, 911	29, 956	+3. 6
Mountain.....	116	11, 321	10, 431	-7. 9	262, 508	224, 369	-14. 5
Pacific.....	12	1, 520	1, 502	-1. 2	38, 962	33, 558	-13. 9
All divisions.....	1, 296	183, 610	178, 808	-2. 6	3, 171, 046	3, 051, 909	-3. 8
METALLIFEROUS MINING							
Middle Atlantic.....	7	1, 054	801	-24. 0	\$20, 974	\$14, 986	-28. 5
East North Central.....	40	8, 262	8, 057	-2. 5	143, 474	123, 919	-13. 6
West North Central.....	59	5, 551	5, 739	+3. 4	136, 856	146, 012	+6. 7
East South Central.....	14	2, 452	2, 454	+0. 1	46, 367	46, 791	+0. 9
West South Central.....	58	1, 867	1, 394	-25. 3	32, 758	27, 675	-15. 5
Mountain.....	97	15, 465	13, 859	-10. 4	417, 795	353, 481	-15. 4
Pacific.....	31	2, 122	2, 126	+0. 2	61, 116	55, 916	-8. 5
All divisions.....	306	36, 773	34, 430	-6. 4	859, 340	768, 780	-10. 5
QUARRYING AND NONMETALLIC MINING							
New England.....	105	3, 997	4, 025	+0. 7	\$101, 780	\$111, 392	+9. 4
Middle Atlantic.....	122	6, 217	6, 170	-0. 8	137, 491	138, 667	+0. 9
East North Central.....	213	7, 068	6, 847	-3. 1	179, 593	156, 073	-13. 1
West North Central.....	90	1, 528	1, 534	+0. 4	32, 250	31, 890	-1. 2
South Atlantic.....	94	4, 974	4, 667	-6. 2	81, 173	71, 569	-11. 8
East South Central.....	65	2, 855	2, 885	+1. 1	42, 204	36, 601	-13. 3
West South Central.....	43	2, 149	2, 128	-1. 0	44, 754	43, 656	-2. 5
Mountain.....	3	57	68	+19. 3	906	1, 819	+100. 8
Pacific.....	37	897	887	-1. 1	24, 167	23, 274	-3. 7
All divisions.....	772	29, 742	29, 211	-1. 8	644, 358	614, 941	-4. 6
CRUDE PETROLEUM PRODUCING							
Middle Atlantic.....	40	695	555	-20. 1	\$16, 897	\$14, 157	-16. 2
East North Central.....	5	26	29	+11. 5	545	513	-5. 9
West North Central.....	7	46	48	+4. 3	794	917	+15. 5
South Atlantic.....	15	415	396	-4. 6	10, 694	10, 235	-4. 3
East South Central.....	5	204	198	-2. 9	4, 271	4, 117	-3. 6
West South Central.....	316	16, 885	17, 619	+4. 3	593, 886	582, 528	-1. 9
Mountain.....	20	273	281	+2. 9	9, 823	9, 215	-6. 2
Pacific.....	91	6, 298	5, 828	-7. 5	253, 158	218, 937	-13. 5
All divisions.....	499	24, 842	24, 954	+0. 5	890, 068	840, 619	-5. 6

TABLE 1.—COMPARISON OF EMPLOYMENT AND PAY-ROLL TOTALS IN IDENTICAL NONMANUFACTURING ESTABLISHMENTS IN JUNE AND JULY, 1931, BY INDUSTRIES—Continued

Geographic division	Estab- lish- ments	Number on pay roll		Per cent of change	Amount of pay roll (1 week)		Per cent of change
		June, 1931	July, 1931		June, 1931	July, 1931	
TELEPHONE AND TELEGRAPH							
New England.....	724	27,567	27,737	+0.6	\$877,312	\$866,852	-1.1
Middle Atlantic.....	1,257	98,842	98,098	-0.8	3,277,533	3,230,468	-1.4
East North Central.....	1,436	68,764	68,024	-1.1	1,924,264	1,867,176	-3.0
West North Central.....	1,375	28,953	29,046	+0.3	732,333	726,445	-0.8
South Atlantic.....	560	19,778	19,815	+0.2	554,463	542,512	-2.2
East South Central.....	618	9,927	9,884	-0.4	226,015	221,123	-2.2
West South Central.....	725	17,173	17,113	-0.3	398,620	392,971	-1.4
Mountain.....	483	7,269	7,327	+0.8	180,300	179,736	-0.3
Pacific.....	913	29,891	29,831	-0.2	937,241	915,583	-2.3
All divisions.....	8,091	308,134	306,875	-0.4	9,108,081	8,942,866	-1.8
POWER, LIGHT, AND WATER							
New England.....	274	22,397	22,234	-0.7	\$725,757	\$721,233	-0.6
Middle Atlantic.....	360	61,390	61,920	+0.9	2,035,273	2,041,034	+0.3
East North Central.....	660	56,201	55,807	-0.7	1,825,005	1,809,926	-0.8
West North Central.....	451	27,858	27,002	-0.9	807,524	798,517	-1.1
South Atlantic.....	281	21,669	21,727	+0.3	668,571	663,825	-0.7
East South Central.....	169	6,955	7,044	+1.3	173,942	176,300	+1.4
West South Central.....	565	16,091	16,254	+1.0	449,310	444,629	-1.0
Mountain.....	117	5,752	5,704	-0.8	177,774	177,341	-0.2
Pacific.....	839	22,995	21,729	-5.5	742,257	703,238	-5.3
All divisions.....	3,716	241,308	40,021	-0.5	7,605,413	7,536,043	-0.9
ELECTRIC RAILROADS ¹							
New England.....	47	13,724	13,850	+0.9	\$491,160	\$492,967	+0.4
Middle Atlantic.....	153	36,942	37,418	+1.3	1,193,887	1,191,013	-0.2
East North Central.....	104	42,286	42,356	+0.2	1,377,237	1,339,605	-2.7
West North Central.....	59	14,104	13,896	-1.5	431,211	413,269	-4.2
South Atlantic.....	56	11,738	11,933	+1.7	333,753	328,109	-1.7
East South Central.....	13	2,703	2,706	+0.1	75,200	72,570	-3.5
West South Central.....	34	5,045	5,108	+1.2	137,511	134,298	-2.3
Mountain.....	15	2,005	2,000	-0.2	54,100	54,012	-0.2
Pacific.....	38	16,186	16,098	-0.5	498,117	484,192	-2.8
All divisions.....	519	144,733	145,365	+0.4	4,592,176	4,510,035	-1.8
WHOLESALE TRADE							
New England.....	606	15,086	14,902	-0.6	\$459,166	\$458,151	-0.2
Middle Atlantic.....	291	9,124	9,069	-0.6	294,483	294,559	+(²)
East North Central.....	293	11,309	11,246	-0.6	347,838	339,108	-2.5
West North Central.....	206	11,905	11,934	+0.2	345,249	347,771	+0.7
South Atlantic.....	168	3,214	3,240	+0.8	94,626	93,797	-0.9
East South Central.....	57	1,562	1,552	-0.6	43,022	42,102	-2.1
West South Central.....	290	5,710	5,634	-1.3	164,720	161,949	-1.7
Mountain.....	85	1,815	1,834	+1.0	60,389	60,216	-0.3
Pacific.....	357	10,062	10,057	-(²)	331,219	322,023	-2.8
All divisions.....	2,353	69,787	69,558	-0.3	2,140,712	2,119,676	-1.0

See footnotes at end of table.

TABLE 1.—COMPARISON OF EMPLOYMENT AND PAY-ROLL TOTALS IN IDENTICAL **NONMANUFACTURING** ESTABLISHMENTS IN JUNE AND JULY, 1931, BY INDUSTRIES—Continued

Geographic division	Estab- lish- ments	Number on pay roll		Per cent of change	Amount of pay roll (1 week)		Per cent of change
		June, 1931	July, 1931		June, 1931	July, 1931	
RETAIL TRADE							
New England.....	2,861	55,373	53,578	-3.2	\$1,336,757	\$1,311,509	-1.9
Middle Atlantic.....	303	78,905	70,067	-11.2	2,031,006	1,853,793	-8.7
East North Central.....	2,742	73,463	70,958	-3.4	1,817,783	1,754,887	-3.5
West North Central.....	681	29,422	18,728	-8.3	433,886	401,838	-7.4
South Atlantic.....	1,053	20,950	19,854	-5.2	460,086	440,188	-4.3
East South Central.....	328	8,026	7,568	-5.7	151,329	141,814	-6.3
West South Central.....	229	12,572	11,812	-6.0	250,695	240,652	-4.0
Mountain.....	189	4,881	4,754	-2.6	104,743	99,952	-4.6
Pacific.....	1,798	40,436	39,563	-2.2	931,246	906,199	-2.7
All divisions.....	10,274	315,028	296,882	-5.8	7,517,531	7,150,832	-4.9
HOTELS							
New England.....	142	8,394	10,698	+27.4	\$133,986	\$159,312	+18.9
Middle Atlantic.....	406	43,623	45,151	+3.5	742,069	747,556	+0.7
East North Central.....	391	29,932	29,568	-1.2	502,625	486,560	-3.2
West North Central.....	285	14,805	14,455	-2.4	205,020	198,387	-3.2
South Atlantic.....	164	11,179	10,681	-4.5	160,288	151,965	-5.2
East South Central.....	89	5,927	5,756	-2.9	69,302	66,755	-3.7
West South Central.....	145	8,359	8,170	-2.3	105,879	102,072	-3.6
Mountain.....	110	3,442	3,599	+4.6	58,751	60,923	+3.7
Pacific.....	333	15,369	15,657	+1.9	280,435	279,906	-0.2
All divisions.....	2,065	141,030	143,735	+1.9	2,258,355	2,253,436	-0.2
CANNING AND PRESERVING							
New England.....	65	1,154	1,340	+16.1	\$22,522	\$23,868	+6.0
Middle Atlantic.....	90	7,997	10,342	+29.3	145,183	165,190	+13.8
East North Central.....	251	7,379	13,892	+88.3	135,100	193,348	+43.1
West North Central.....	59	1,902	3,236	+70.1	29,769	51,319	+72.4
South Atlantic.....	90	3,538	3,804	+7.5	40,066	35,417	-11.6
East South Central.....	27	1,487	1,218	-18.1	15,904	14,044	-11.7
West South Central.....	30	1,507	1,330	-11.7	6,678	6,900	+3.3
Mountain.....	54	1,219	3,725	+205.6	27,015	56,877	+110.5
Pacific.....	212	17,094	23,746	+38.9	222,691	269,271	+20.9
All divisions.....	878	43,277	62,634	+44.7	644,428	816,234	+26.6
LAUNDRIES							
New England.....	45	2,496	2,505	+0.4	\$53,328	\$54,029	+1.3
Middle Atlantic.....	89	11,309	11,260	-0.4	230,815	230,680	-0.1
East North Central.....	83	5,411	5,502	+1.7	104,590	105,269	+0.6
West North Central.....	62	5,191	5,211	+0.4	91,090	89,570	-1.7
South Atlantic.....	53	5,834	5,973	+2.4	92,336	92,957	+0.7
East South Central.....	36	2,325	2,436	+4.8	30,195	31,221	+3.4
West South Central.....	11	842	864	+2.6	12,092	12,565	+3.9
Mountain.....	20	1,731	1,723	-0.5	29,709	29,444	-0.9
Pacific.....	54	3,518	3,541	+0.7	76,292	76,606	+0.4
All divisions.....	453	38,657	39,015	+0.9	720,447	722,341	+0.3

See footnotes at end of table.

TABLE 1.—COMPARISON OF EMPLOYMENT AND PAY-ROLL TOTALS IN IDENTICAL NONMANUFACTURING ESTABLISHMENTS IN JUNE AND JULY, 1931, BY INDUSTRIES—Continued

Geographic division	Estab- lish- ments	Number on pay roll		Per cent of change	Amount of pay roll (1 week)		Per cent of change
		June, 1931	July, 1931		June, 1931	July, 1931	
DYEING AND CLEANING							
New England.....	23	1, 190	1, 169	-1.8	\$28, 090	\$27, 431	-2.3
Middle Atlantic.....	24	1, 553	1, 565	+0.8	39, 257	36, 913	-6.0
East North Central.....	25	1, 364	1, 342	-1.6	31, 243	28, 994	-7.2
West North Central.....	35	1, 034	1, 004	-2.9	23, 249	22, 137	-4.8
South Atlantic.....	43	1, 175	1, 212	+3.1	22, 210	22, 897	+3.1
East South Central.....	14	633	638	+0.8	11, 632	11, 511	-1.0
West South Central.....	16	375	369	-1.6	7, 683	7, 425	-3.4
Mountain.....	21	279	283	+1.4	6, 706	6, 433	-4.1
Pacific.....	13	710	697	-1.8	17, 651	17, 854	+1.2
All divisions.....	214	8, 313	8, 279	-0.4	187, 721	181, 595	-3.3

¹ Not including car building and repairing; see manufacturing industries, Table 1, p. 211 et seq.

² Less than one-tenth of 1 per cent.

³ The amount of pay roll given represents cash payments only; the additional value of board, room, and tips can not be computed.

⁴ Included in the total of 878 establishments reporting in July were 59 establishments which were closed in June but had resumed operation in July, and 15 establishments which were operating in June and reported a seasonal closing in July, 1931. There were also 227 additional canning establishments whose reports were not included in the total number of reporting establishments, as the plants had been seasonally closed for a period of 2 or more months.

TABLE 2.—COMPARISON OF EMPLOYMENT AND PAY-ROLL TOTALS IN NONMANUFACTURING INDUSTRIES JULY, 1931, WITH JULY, 1930

Industry	Per cent of change July, 1931, compared with July, 1930		Industry	Per cent of change July, 1931, compared with July, 1930	
	Number on pay roll	Amount of pay roll		Number on pay roll	Amount of pay roll
Anthracite mining.....	-28.9	-36.1	Electric railroads.....	-10.2	-12.9
Bituminous coal mining.....	-13.2	-26.9	Wholesale trade.....	-9.6	-13.2
Metalliferous mining.....	-30.2	-42.6	Retail trade.....	-5.7	-9.2
Quarrying and nonmetallic mining.....	-21.0	-24.1	Hotels.....	-7.9	-14.6
Crude petroleum producing.....	-27.4	-33.1	Canning and preserving.....	-19.1	-34.2
Telephone and telegraph.....	-13.4	-12.5	Laundries.....	(1)	(1)
Power, light, and water.....	-8.7	-8.7	Dyeing and cleaning.....	(1)	(1)

¹ Data not available.

Indexes of Employment and Pay-Roll Totals for Nonmanufacturing Industries

TABLE 3 shows the index numbers of employment and pay-roll totals for anthracite, bituminous coal, and metalliferous mining, quarrying, crude petroleum producing, telephone and telegraph, power, light, and water, electric railroads, wholesale and retail trade, hotels, and canning and preserving, by months, from January, 1930, to July, 1931, with the monthly average for 1929 as 100.

TABLE 3.—INDEXES OF EMPLOYMENT AND PAY-ROLL TOTALS FOR NONMANUFACTURING INDUSTRIES, JANUARY, 1930, TO JULY, 1931

(Monthly average, 1929=100)

Year and month		Anthracite mining		Bituminous coal mining		Metalliferous mining		Quarrying and non-metallic mining		Crude petroleum producing		Telephone and telegraph		Power, light, and water		Operation and maintenance of electric railroads ¹		Wholesale trade		Retail trade		Hotels		Canning and pre-serving	
		Em- ploy- ment	Pay- roll totals	Em- ploy- ment	Pay- roll totals	Em- ploy- ment	Pay- roll totals	Em- ploy- ment	Pay- roll totals	Em- ploy- ment	Pay- roll totals	Em- ploy- ment	Pay- roll totals	Em- ploy- ment	Pay- roll totals	Em- ploy- ment	Pay- roll totals	Em- ploy- ment	Pay- roll totals	Em- ploy- ment	Pay- roll totals	Em- ploy- ment	Pay- roll totals	Em- ploy- ment	Pay- roll totals
1930																									
January.....		102.1	105.8	102.5	101.4	95.7	92.7	79.6	71.9	92.7	94.0	101.6	105.1	99.6	99.7	97.1	97.8	100.0	100.0	98.9	99.7	100.4	100.3	46.1	50.3
February.....		106.9	121.5	102.4	102.1	92.3	92.5	79.8	83.5	91.8	88.6	100.2	101.9	98.8	100.4	95.1	95.7	98.3	98.3	94.4	96.0	102.4	103.8	45.7	51.5
March.....		82.6	78.5	95.6	86.4	90.9	90.8	83.0	80.0	89.3	91.3	99.4	105.8	99.7	102.1	94.4	95.4	97.7	97.7	93.0	95.5	102.4	104.4	49.7	50.8
April.....		84.1	75.0	94.4	81.7	89.3	88.3	87.4	85.4	86.8	86.6	98.9	103.4	95.2	102.6	95.2	97.1	97.3	97.9	97.3	97.5	100.3	74.8	72.6	
May.....		93.8	98.8	90.4	77.5	87.5	85.6	90.8	90.2	89.8	85.4	99.7	103.2	95.2	104.5	95.2	96.8	97.4	96.7	98.0	98.4	65.7	66.9		
June.....		90.8	94.3	88.4	75.6	84.6	81.6	80.3	80.9	90.2	87.1	99.8	103.4	94.8	107.8	94.8	97.0	96.5	98.6	93.9	96.8	98.1	83.0	81.5	
July.....		91.6	84.0	88.0	68.9	80.5	71.9	89.9	85.5	89.9	88.5	100.0	106.6	95.3	106.7	95.3	95.6	96.0	96.0	89.0	91.7	101.3	96.8	126.3	112.7
August.....		80.2	78.8	89.2	71.1	79.0	71.0	89.3	85.8	87.7	86.0	98.8	102.5	92.9	106.6	92.9	92.1	95.0	93.6	85.6	87.6	101.5	98.6	185.7	172.0
September.....		93.8	91.6	90.5	74.9	78.1	69.9	87.7	82.5	85.0	84.0	96.8	102.2	91.8	106.1	91.8	90.5	94.8	93.6	92.0	92.4	100.1	97.1	246.6	214.8
October.....		99.0	117.2	91.8	79.4	77.2	68.6	84.7	79.3	85.2	82.6	94.5	100.9	94.8	105.6	91.0	89.9	94.2	92.9	95.5	95.1	97.5	104.7	140.0	
November.....		97.2	98.0	92.5	79.1	72.8	63.4	78.3	66.8	83.6	80.0	93.0	97.7	103.4	103.7	89.3	87.7	92.6	91.0	98.4	95.2	93.6	96.7	82.9	
December.....		99.1	100.0	92.5	77.7	70.1	59.9	70.2	59.9	77.4	77.2	91.6	101.3	103.2	106.3	88.8	88.6	92.0	91.3	115.1	107.7	93.5	91.5	61.6	57.4
Average.....		93.4	95.3	93.4	81.3	83.2	78.0	84.3	79.3	87.4	85.9	97.9	102.9	93.4	104.3	93.4	93.5	96.0	95.9	95.9	96.2	99.2	98.5	103.9	96.1
1931																									
January.....		90.6	89.3	93.9	73.3	68.3	55.0	64.4	50.4	74.8	71.5	90.5	96.3	86.9	98.6	86.9	85.6	89.5	87.5	90.0	89.4	95.0	91.0	48.9	46.1
February.....		89.5	101.9	91.5	68.3	65.3	54.6	66.6	54.4	73.2	70.0	89.2	94.8	86.6	99.7	86.6	87.1	88.2	88.4	87.1	86.7	96.8	93.7	48.3	48.6
March.....		82.0	71.3	88.8	65.2	63.5	52.8	70.0	58.2	72.2	73.2	88.6	97.9	86.7	102.4	86.4	88.1	87.4	89.1	87.8	96.8	93.4	53.0	50.3	
April.....		85.2	75.2	85.9	58.6	63.9	51.4	76.1	62.6	69.8	66.3	88.1	95.0	87.1	97.6	86.8	86.6	87.4	85.2	90.1	88.3	95.9	89.9	59.6	57.1
May.....		80.3	76.1	82.4	54.4	62.4	49.3	75.0	62.3	67.8	64.7	87.4	94.1	85.9	98.7	85.9	85.1	87.1	84.7	89.9	92.5	87.7	56.0	56.0	
June.....		76.1	66.7	78.4	52.4	60.0	46.1	72.3	60.1	65.0	62.7	86.9	95.0	84.8	98.3	85.3	84.8	87.1	84.1	89.1	91.6	85.4	70.6	58.6	
July.....		65.1	53.7	76.4	50.4	56.2	41.3	71.0	57.3	65.3	59.2	86.6	93.3	83.6	96.7	85.6	83.3	86.8	83.3	83.9	93.3	85.2	102.2	74.2	

¹ Not including electric-railroad car building and repairing; see vehicles group, manufacturing industries, Table 1, p. 211 et seq.

Employment in Building Construction in July, 1931

DATA for each of the 25 localities surveyed by the Bureau of Labor Statistics, together with similar information supplied by three cooperating State bureaus, which collect this information within their respective jurisdictions, appear in the following table. This table shows the number of identical firms reporting for both months, the number of employees and the amount of earnings in one week in June and July, 1931, together with the per cents of change over the month period. The results of the compilation for the 25 localities surveyed by the Federal bureau have been issued in a preliminary press release, and therefore, to avoid any seeming contradiction of reports, the totals of the two groups are shown separately. However, to present as much available information as possible concerning the building-construction industry, a combined total of the two groups, together with the per cents of change occurring from June to July, is given at the end of the table.

COMPARISON OF EMPLOYMENT AND PAY-ROLL TOTALS IN IDENTICAL FIRMS IN THE BUILDING-CONSTRUCTION INDUSTRY, JUNE AND JULY, 1931

Localities	Number of firms reporting	Number on pay roll		Per cent of change	Amount of pay roll (1 week)		Per cent of change
		June, 1931	July, 1931		June, 1931	July, 1931	
Atlanta.....	115	1,755	1,744	-0.6	\$33,543	\$32,662	-2.6
Birmingham.....	68	932	848	-9.0	17,885	17,027	-4.8
Charlotte, N. C.....	37	694	614	-11.5	14,268	14,554	+2.0
Cleveland.....	403	6,170	6,208	+0.6	229,803	222,158	-3.3
Dallas.....	116	1,826	1,552	-15.0	47,866	39,513	-17.5
Denver.....	172	1,365	1,337	-2.1	38,231	39,025	+2.1
Des Moines.....	59	1,099	1,027	-6.6	31,740	30,833	-2.9
Hartford.....	230	1,981	1,924	-2.9	64,052	64,221	+0.3
Indianapolis.....	181	2,224	2,398	+7.8	74,526	77,058	+3.4
Jacksonville.....	52	385	375	-2.6	7,178	6,623	-7.7
Louisville.....	121	1,234	1,215	-1.5	28,909	28,010	-3.1
Memphis.....	88	833	791	-5.0	17,559	17,303	-1.5
Minneapolis.....	242	3,764	3,898	+3.6	114,293	111,455	-2.5
New Orleans.....	121	2,600	2,703	+4.0	55,033	52,718	-4.2
Oklahoma City.....	77	1,195	974	-18.5	35,400	28,214	-20.3
Omaha.....	109	1,253	1,243	-0.8	34,554	37,693	+9.1
Portland, Me.....	82	679	618	-9.0	20,293	18,982	-6.5
Portland, Oreg.....	178	1,579	1,496	-5.3	49,194	47,626	-3.2
Providence.....	213	2,702	2,451	-9.3	78,927	75,447	-4.4
Richmond.....	136	1,890	1,919	+1.5	46,689	48,589	+4.1
St. Louis.....	471	4,483	4,443	-0.9	164,808	160,021	-2.9
Salt Lake City.....	85	454	456	+0.4	12,381	11,639	-6.0
Seattle.....	176	2,892	2,592	-10.4	90,939	80,175	-11.8
Washington.....	445	11,206	10,628	-5.2	344,931	322,651	-6.5
Wilmington, Del.....	100	1,606	1,575	-1.9	45,208	44,855	-0.8
Total—25 cities.....	4,082	56,801	55,029	-3.1	1,629,052	1,698,210	+4.1
Baltimore, Md. ¹	73	2,128	1,938	-8.9	51,709	44,189	-14.5
Massachusetts ¹	755	10,380	10,457	+0.7	325,347	368,644	+13.3
Wisconsin ¹	74	3,034	2,991	-1.4	73,786	74,629	+1.1
Total—3 cooperating State bureaus.....	902	15,542	15,386	-1.0	450,842	487,462	+8.1
Total—all localities.....	4,984	72,343	70,415	-2.7	2,079,894	2,185,672	+5.1

¹ Data supplied by cooperating State bureaus.

Data concerning the building-construction industry, shown in the foregoing table, have not been included in the summary table, page 206. The several industrial groups in the summary table are not

weighted according to their relative importance, and the bureau's monthly employment survey of the building-construction industry, while being steadily expanded, has not yet attained sufficient volume to represent its proper proportion in comparison with the other 15 industrial groups in the summary table.

Employment on Class I Steam Railroads in the United States

THE monthly trend of employment from January, 1923, to June, 1931, on Class I railroads—that is, all roads having operating revenues of \$1,000,000 or over—is shown by the index numbers published in Table 1. These index numbers are constructed from monthly reports of the Interstate Commerce Commission, using the monthly average for 1926 as 100.

TABLE 1.—INDEX OF EMPLOYMENT ON CLASS I STEAM RAILROADS IN THE UNITED STATES, JANUARY, 1923, TO JUNE, 1931

[Monthly average, 1926=100]

Month	1923	1924	1925	1926	1927	1928	1929	1930	1931
January.....	98.3	96.9	95.6	95.8	95.5	89.3	88.2	86.3	73.7
February.....	98.6	97.0	95.4	96.0	95.3	89.0	88.9	85.4	72.7
March.....	100.5	97.4	95.2	96.7	95.8	89.9	90.1	85.5	72.9
April.....	102.0	98.9	96.6	98.9	97.4	91.7	92.2	87.0	73.5
May.....	105.0	99.2	97.8	100.2	99.4	94.5	94.9	88.6	73.9
June.....	107.1	98.0	98.6	101.6	100.9	95.9	96.1	86.5	72.8
July.....	108.2	98.1	99.4	102.9	101.0	95.6	96.6	84.7	-----
August.....	109.4	99.0	99.7	102.7	99.5	95.7	97.4	83.7	-----
September.....	107.8	99.7	99.9	102.8	99.1	95.3	96.8	82.2	-----
October.....	107.3	100.8	100.7	103.4	98.9	95.3	96.9	80.4	-----
November.....	105.2	99.0	99.1	101.2	95.7	92.9	93.0	77.0	-----
December.....	99.4	96.0	97.1	98.2	91.9	89.7	88.8	74.9	-----
Average.....	104.1	98.3	97.9	100.0	97.5	92.9	93.3	83.5	¹ 73.3

¹ Average for 6 months.

Table 2 shows the total number of employees on the 15th day each of June, 1930, and May and June, 1931, and pay-roll totals for the entire months.

In these tabulations data for the occupational group reported as "executives, officials, and staff assistants" are omitted.

TABLE 2.—EMPLOYMENT AND EARNINGS OF RAILROAD EMPLOYEES, JUNE, 1930, AND MAY AND JUNE, 1931

[From monthly reports of Interstate Commerce Commission. As data for only the more important occupations are shown separately, the group totals are not the sum of the items under the respective groups]

Occupation	Number of employees at middle of month			Total earnings		
	June, 1930	May, 1931	June, 1931	June, 1930	May, 1931	June, 1931
Professional, clerical, and general.....	256,686	227,838	224,357	\$37,421,105	\$33,616,285	\$33,202,013
Clerks.....	142,980	124,284	122,216	19,614,331	17,251,169	17,021,539
Stenographers and typists.....	23,811	21,219	20,933	3,099,865	2,780,258	2,766,491
Maintenance of way and structures.....	394,934	308,317	310,044	36,706,745	27,963,239	28,360,419
Laborers, extra gang and work train.....	65,464	37,276	39,040	4,965,985	2,583,532	2,752,381
Laborers, track, and roadway section.....	201,585	164,113	165,031	14,422,788	11,087,900	11,319,432

PER CENT OF CHANGE IN EMPLOYMENT AND PAY ROLLS IN SPECIFIED STATES—
Continued

Monthly period—Continued

State, and industry group	Per cent of change, May to June, 1931		State, and industry group	Per cent of change, June to July, 1931	
	Employment	Pay roll		Employment	Pay roll
California—Continued			Maryland		
Other wood manufactures	+2.5	+7.3	Food products	-0.1	+1.6
Leather and rubber goods	-2.2	+4.3	Textiles	-1.4	-3.1
Petroleum producing and refining	-6.1	-4.7	Iron and steel, and their products	+1.5	-7.7
Other miscellaneous chemical products	-2.6	+1.6	Lumber and its products	-6.5	-4.0
Printing	-3.1	-3.1	Leather and its products	+3.5	+0.4
Publishing	-1.4	-2.8	Rubber tires	-1.1	-3.3
Paper goods	+1.5	-1.1	Paper and printing	+3.3	-2.3
Textiles	-8.8	-8.8	Chemicals and allied products	-8.3	-9.9
Clothing, millinery, and laundering	-6.1	-7.8	Stone, clay, and glass products	-12.3	-24.6
Foods, beverages, and tobacco	+8.2	-4.4	Metal products, other than iron and steel	+1.1	+13.0
Motion pictures	+6.4	+8.6	Tobacco products	+1.9	+5.3
Miscellaneous	+7.8	+16.7	Transportation equipment	-20.6	-23.6
All industries	-1.5	-2.9	Car building and repairing	+2.0	-5.1
			Miscellaneous	-12.5	-13.1
June to July, 1931			All manufacturing		
Illinois			Retail establishments	-4.7	+1.6
Stone, clay, and glass products	-3.8	-5.7	Wholesale establishments	+9.1	-2.5
Metals, machinery, and conveyances	-5.3	-8.4	Public utilities	+1.8	-1.2
Wood products	-7.3	-7.6	Coal mines	+1.8	+16.5
Furs and leather goods	+3.1	+5.0	Hotels	-2.4	-7.6
Chemicals, oils, paints, etc.	-1.3	+2.1	Quarries	+1.4	+8.9
Printing and paper goods	+1.7	+1.4	Building construction	-8.8	-13.5
Textiles	-1.9	-5.7	Laundries	+1.3	+1.6
Clothing and millinery	+1.5	+20.8	Cleaning and dyeing establishments	+6.1	+3.6
Foods, beverages, and tobacco	+1.1	-2.5			
Miscellaneous	-8.8	-61.1	Employment—index numbers (1925=1927=100)		
All manufacturing	-2.5	-3.5	May, 1931	June, 1931	
Trade, wholesale and retail services	-1.9	-1.0			
Public utilities	-3.0	-5.2			
Coal mining	-3.1	-6.9			
Building and contracting	-1.0	+1.7			
	-7.2	-7.3			
All nonmanufacturing	-2.9	-5.5			
All industries	-2.6	-4.4			
Iowa			Massachusetts		
Food and kindred products	+0.4		Boot and shoe cut stock and findings	86.3	78.9
Textiles	-8.3		Boots and shoes	66.2	60.1
Iron and steel works	-2.9		Bread and other bakery products	97.9	99.8
Lumber products	+1.4		Clothing, men's	51.4	58.4
Leather products	-1.3		Clothing, women's	99.5	95.3
Paper products, printing and publishing	-1.0		Confectionery	80.9	82.6
Patent medicines, chemicals, and compounds	-10.9		Cotton goods	58.1	54.5
Stone and clay products	-4.4		Dyeing and finishing textiles	92.0	87.6
Tobacco and cigars	-2.0		Electrical machinery, apparatus, and supplies	66.2	64.9
Railway car shops	+1.8		Foundry and machine-shop products	83.8	81.3
Various industries	-2.4		Furniture	70.2	67.4
All industries	-1.2		Hosiery and knit goods	70.0	70.0
			Leather, tanned, curried, and finished	94.6	94.0
			Paper and wood pulp	81.3	78.1
			Printing and publishing	98.0	95.0
			Rubber footwear	60.6	66.7
			Rubber goods, tires, and tubes	60.3	58.7
			Silk goods	60.3	53.6
			Textile machinery and parts	61.9	61.5
			Woolen and worsted goods	69.3	71.8
			All industries	70.8	69.0

PER CENT OF CHANGE IN EMPLOYMENT AND PAY ROLLS IN SPECIFIED STATES—
Continued

Monthly period—Continued

State, and industry group	Per cent of change, June to July, 1931		State, and industry group	Per cent of change, June to July, 1931	
	Employment	Pay roll		Employment	Pay roll
Michigan			New York—Continued		
Paper and printing.....	-1.1	-4.7	Metals and machinery— Continued.		
Chemicals and allied products.....	-2.0	-3.1	Automobiles, carriages, and airplanes.....	-6.1	-6.6
Stone, clay, and glass products.....	+1.8	+4.4	Railroad equipment and repair.....	-7.1	-9.0
Metal products, not iron and steel.....	-6.4	-16.1	Boat and ship building.....	(1)	-10.2
Iron and steel products.....	-8.9	-14.1	Instruments and appli- ances.....	-6.6	-8.9
Lumber and its products.....	-2.5	+3.3	Wood manufactures.....	-1.5	-2
Leather and its products.....	+6.7	+10.6	Saw and planing mills.....	+1.0	+1
Food and kindred products.....	+2.5	+2.9	Furniture and cabinet- work.....	-2.1	+4.7
Textiles and their products.....	-7.2	-16.4	Pianos and other musi- cal instruments.....	+1.2	-10.4
Tobacco products.....	-2.3	-4.5	Miscellaneous wood.....	-4.3	-1.6
Vehicles for land transpor- tation.....	-11.0	-28.7	Furs, leather, and rubber goods.....	+2.2	+8.0
Miscellaneous.....	-4.6	-20.8	Leather.....	+6.4	+8.7
All industries.....	-9.2	-24.1	Furs and fur goods.....	+6.9	+14.3
New Jersey			Shoes.....	+3.0	+10.0
	May to June, 1931		Other leather and canvas goods.....	-4.1	-1.1
Food and kindred prod- ucts.....	-3.4	+2.2	Rubber and gutta- percha.....	-4	-1.4
Textiles and their products.....	-2.6	-8.5	Pearl, horn, bone, etc.....	-4	-1.0
Iron and steel and their products.....	-2.2	-5.1	Chemicals, oils, paints, etc.....	-1.3	-1.0
Lumber and its products.....	-2.3	-3.8	Drugs and chemicals.....	+2.4	+7.8
Leather and its products.....	-7.7	-4.7	Paints and colors.....	-4.2	-6.4
Tobacco products.....	+2.3	+6.0	Oil products.....	-2.4	-4.2
Paper and printing.....	+1	-1.8	Miscellaneous chemi- cals.....	-2.1	-2.7
Chemicals and allied prod- ucts.....	-3.3	-2.7	Paper.....	+4	+2.3
Stone, clay, and glass prod- ucts.....	-1.3	-7.0	Printing and paper goods.....	-2.1	-3.6
Metal products other than iron and steel.....	-2.5	-6.0	Paper boxes and tubes.....	-3.9	-6.0
Vehicles for land transpor- tation.....	-6.9	-17.4	Miscellaneous paper goods.....	-4.2	-4.9
Miscellaneous.....	-1	-4.8	Printing and book- making.....	-1.6	-3.3
All industries.....	-2.3	-5.6	Textiles.....	-4	+2
New York			Silk and silk goods.....	+3.0	+4.1
	June to July, 1931		Wool manufactures.....	-8	+4
Stone, clay, and glass.....	-9.0	-10.2	Cotton goods.....	+2.9	+10.9
Miscellaneous stone and minerals.....	-5.7	-12.4	Knit goods (excluding silk).....	-1.1	-2.4
Lime, cement, and plaster.....	+1.0	+1	Other textiles.....	-2.4	-2.5
Brick, tile, and pottery.....	-10.0	-10.7	Clothing and millinery.....	-2.3	+4.3
Glass.....	-18.2	-16.8	Men's clothing.....	+5.2	+18.3
Metals and machinery.....	-5.1	-6.9	Men's furnishings.....	+2.1	+4.3
Silver and jewelry.....	-12.6	-17.4	Women's clothing.....	-8.0	+4.0
Brass, copper, and aluminum.....	-2.1	-5.8	Women's underwear.....	-9.6	-12.3
Iron and steel.....	-5.8	+1.1	Women's headwear.....	-18.4	-19.4
Structural and archi- tectural iron.....	+4.0	+10.9	Miscellaneous sewing.....	-9.1	-7.7
Sheet metal and hard- ware.....	-3.7	-6.0	Laundrying and clean- ing.....	-6	-1.0
Firearms, tools, and cutlery.....	-7.8	-9.4	Food and tobacco.....	+3.8	+2
Cooking, heating, and ventilating appara- tus.....	-1.1	+3.9	Flour, feed, and cereal.....	-1.1	+3.2
Machinery, including electrical apparatus.....	-4.4	-7.9	Canning and preserv- ing.....	+71.7	+31.6
			Other groceries.....	-1	+3
			Meat and dairy prod- ucts.....	-7	-1.0
			Bakery products.....	-1.0	-7
			Candy.....	-3.4	-13.0
			Beverages.....	-4.8	+6.2
			Tobacco.....	-4.4	-5.1
			Water, light, and power.....	+1	+2.3
			All industries.....	-2.0	-1.9

(1) No change.

PER CENT OF CHANGE IN EMPLOYMENT AND PAY ROLLS IN SPECIFIED STATES—
Continued

Continued

Monthly period—Continued

State, and industry group	Per cent of change, June to July, 1931	
	Employment	Pay roll
Oklahoma		
Cottonseed-oil mills.....	+32.1	+37.1
Food production:		
Confections.....	-50.6	-46.0
Flour mills.....	+20.9	+25.6
Ice and ice cream.....	+28.1	+22.3
Meat and poultry.....	+1.1	+1.1
Oil industry: Refineries.....	-11.3	-13.3
Public utilities:		
Steam-railroad shops.....	.0	-.2
Street railways.....	-.2	-3.0
Water, light, and power.....	-6.6	-7.3
Stone, clay, and glass:		
Brick and tile.....	-22.7	-21.9
Cement and plaster.....	-12.5	-30.8
Glass manufacture.....	-12.6	-8.4
Textiles and cleaning:		
Textile manufacture.....	+37.1	.0
Woodworking:		
Sawmills.....	-1.4	-21.6
Millwork, etc.....	-9.0	-22.6
Pennsylvania		
Metal products.....	-3.8	-6.9
Transportation equipment.....	-3.5	-8.3
Textile products.....	-4.3	-13.6
Foods and tobacco.....	-.6	-2.8
Stone, clay, and glass products.....	-5.8	-15.0
Lumber products.....	+4.0	+3.4
Chemical products.....	-1.8	-4.6
Leather and rubber products.....	+8.8	+4.7
Paper and printing.....	-2.5	-6.1
All manufacturing.....	-2.7	-8.3
Texas		
Auto and body works.....	-3.4	
Bakeries.....	-2.5	
Confectioneries.....	-56.9	
Pure food products.....	-19.2	
Ice cream factories.....	-2.3	
Flour mills.....	+11.7	
Ice factories.....	+24.1	
Meat packing and slaughtering.....	-5.0	
Cotton oil mills.....	-17.2	
Cotton compresses.....	+17.3	
Men's clothing manufacture.....	+8.8	
Women's clothing manufacture.....	-36.6	
Brick, tile, and terra cotta.....	+9.1	
Foundries and machine shops.....	-8.2	
Structural-iron works.....	-3.1	
Railroad car shops.....	-1.8	
Electric-railway car shops.....	-4.2	
Petroleum refining.....	-.1	
Sawmills.....	-7.5	
Lumber mills.....	+10.5	
Furniture manufacture.....	+1.7	
Paper-box manufacture.....	-3.6	
Cotton-textile mills.....	-3.3	
Cement plants.....	-7.6	
Commercial printing.....	+8.8	
Newspaper publishing.....	-2.6	

PER CENT OF CHANGE IN EMPLOYMENT AND PAY ROLLS IN SPECIFIED STATES—
Continued

Yearly period

State, and industry group	Per cent of change, June, 1930, to June, 1931		State, and industry group	Employment—index numbers (1925-1927 =100)	
	Employ- ment	Pay roll		June, 1930	June, 1931
California			Massachusetts—Contd.		
Stone, clay, and glass prod- ucts.....	-15.9	-23.8	Cotton goods.....	58.6	54.5
Metals, machinery, and conveyances.....	-21.2	-30.6	Dyeing and finishing tex- tiles.....	92.5	87.6
Wood manufactures.....	-21.1	-30.5	Electrical machinery, ap- paratus, and supplies.....	80.3	64.9
Leather and rubber goods.....	-6.9	-8.3	Foundry and machine- shop products.....	102.8	81.3
Chemicals, oils, paints, etc. Printing and paper goods.....	-24.9	-32.8	Furniture.....	87.5	67.4
Textiles.....	-9.4	-13.3	Hosiery and knit goods.....	77.9	70.0
Clothing, millinery, and laundering.....	-6.3	-13.4	Leather, tanned, curried, and finished.....	95.8	94.0
Foods, beverages, and to- bacco.....	-6.6	-14.3	Paper and wood pulp.....	90.7	78.1
Miscellaneous ¹	-17.4	-24.7	Printing and publishing.....	102.6	95.0
	-12.7	-15.5	Rubber footwear.....	76.5	66.7
			Rubber goods, tires, and tubes.....	80.2	58.7
All industries.....	-18.1	-26.1	Silk goods.....	81.4	53.6
Public utilities.....	-9.8	-12.9	Textile machinery and parts.....	69.1	61.5
Wholesale and retail.....	-7.9	-14.5	Woolen and worsted goods.....	73.2	71.8
			All industries.....	78.5	69.0
	Employment—index numbers (1925-1927 =100)			Per cent of change, June, 1930, to June, 1931	
	July, 1930	July, 1931		Employ- ment	Pay roll
Illinois			Michigan		
Stone, clay, and glass prod- ucts.....	78.6	66.8	Paper and printing.....	-10.9	-13.7
Metals, machinery, and conveyances.....	86.2	65.2	Chemicals and allied prod- ucts.....	-14.4	-16.6
Wood products.....	60.5	45.1	Stone, clay, and glass prod- ucts.....	-27.6	-32.2
Furs and leather goods.....	88.6	98.7	Metal products, not iron and steel.....	-9.5	-14.6
Chemicals, oils, paints, etc. Printing and paper goods.....	92.9	80.6	Iron and steel products.....	-18.0	-31.1
Textiles.....	107.3	88.9	Lumber and its products.....	-23.7	-24.5
Clothing and millinery.....	84.4	91.6	Leather and its products.....	-12.5	-29.4
Foods, beverages, and to- bacco.....	75.8	74.5	Food and kindred products.....	-9.6	-13.0
	88.8	77.0	Textiles and their products.....	-3.8	-3.1
All manufacturing.....	85.7	70.5	Tobacco products.....	-1.9	-12.2
Trade, wholesale and retail.....	69.0	63.9	Vehicles for land transpor- tation.....	-21.3	-40.1
Public utilities.....	102.1	92.9	Miscellaneous.....	-27.5	-29.3
Coal mining.....	64.1	68.1	All industries.....	-20.1	-36.0
Building and contracting.....	73.4	43.7		July, 1930, to July, 1931	
All industries.....	87.3	74.7			
	June, 1930	June, 1931	New York		
Massachusetts			Stone, clay, and glass.....	-13.9	-21.1
Boot and shoe cut stock and findings.....	86.2	78.9	Miscellaneous stone and minerals.....	-18.1	-29.1
Boots and shoes.....	70.3	60.1	Lime, cement, and plaster.....	-4.4	-4.5
Bread and other bakery products.....	108.2	99.8	Brick, tile, and pottery.....	-17.0	-27.7
Clothing, men's.....	66.1	58.4	Glass.....	-14.2	-20.2
Clothing, women's.....	100.4	95.3			
Confectionery.....	79.9	82.6			

¹ Includes motion pictures.

PER CENT OF CHANGE IN EMPLOYMENT AND PAY ROLLS IN SPECIFIED STATES—
Continued

Yearly period—Continued

State, and industry group	Per cent of change, July, 1930, to July, 1931		State, and industry group	Per cent of change, July, 1930, to July, 1931	
	Employment	Pay roll		Employment	Pay roll
New York—Continued			New York—Continued		
Metals and machinery.....	-21.1	-31.9	Food and tobacco.....	-17.2	-21.9
Silver and jewelry.....	-28.4	-49.0	Flour, feed, and cereals.....	+1.1	-7.9
Brass, copper, and aluminum.....	-20.8	-29.1	Canning and preserving.....	-42.7	-61.9
Iron and steel.....	-13.6	-29.1	Other groceries.....	-24.6	-26.7
Structural and architectural iron.....	-27.7	-33.1	Meat and dairy products.....	-16.0	-19.3
Sheet metal and hardware.....	-19.4	-27.8	Bakery products.....	-12.3	-12.4
Firearms, tools, and cutlery.....	-28.5	-41.3	Candy.....	-3	-17.1
Cooking, heating, and ventilating apparatus.....	-10.2	-18.6	Beverages.....	-2.4	-4.4
Machinery, including electrical apparatus.....	-21.1	-34.3	Tobacco.....	-4	-8.9
Automobiles, carriages, and airplanes.....	-20.1	-29.8	Water, light, and power.....	-9.0	-4.2
Railroad equipment and repairs.....	-24.9	-32.4	All industries.....	-13.9	-20.2
Boat and ship building.....	-30.1	-40.3	Pennsylvania		
Instruments and appliances.....	-19.7	-27.4	Metal products.....	-23.9	-40.1
Wood manufactures.....	-22.1	-29.2	Transportation equipment.....	-34.0	-52.7
Saw and planing mills.....	-21.4	-27.1	Textile products.....	-5.7	-8.7
Furniture and cabinet-work.....	-25.6	-34.7	Foods and tobacco.....	-5.4	-10.0
Pianos, and other musical instruments.....	-33.7	-46.5	Stone, clay, and glass products.....	-18.7	-29.8
Miscellaneous wood.....	-9.7	-8.4	Lumber products.....	-22.0	-28.8
Furs, leather, and rubber goods.....	-6.1	-5.8	Chemical products.....	-3.6	-15.2
Leather.....	+3.2	+8.8	Leather and rubber products.....	-2.9	-8.1
Furs and fur goods.....	-2.4	-10.9	Paper and printing.....	-7.4	-15.1
Shoes.....	-4.4	+2	All manufacturing.....	-17.2	-31.5
Other leather and canvas goods.....	-18.1	-26.3	Texas		
Rubber and gutta-percha.....	-9.7	-16.9	Auto and body works.....	-8.2	-----
Pearl, horn, bone, etc.....	-9.4	-20.3	Bakeries.....	-9.7	-----
Chemicals, oils, paints, etc.....	-11.1	-15.9	Confectioneries.....	-52.5	-----
Drugs and chemicals.....	-7.7	-10.2	Pure food products.....	-27.3	-----
Paints and colors.....	-13.0	-18.8	Ice-cream factories.....	-5.5	-----
Oil products.....	-6.7	-11.1	Flour mills.....	-13.8	-----
Miscellaneous chemicals.....	-16.1	-22.3	Ice factories.....	+4.1	-----
Paper.....	-7.7	-13.4	Meat packing and slaughtering.....	-6.7	-----
Printing and paper goods.....	-10.6	-11.1	Cotton-oil mills.....	+8	-----
Paper boxes and tubes.....	-10.9	-17.0	Cotton compresses.....	+64.8	-----
Miscellaneous paper goods.....	-15.1	-17.3	Men's clothing manufacture.....	+12.5	-----
Printing and book-making.....	-9.9	-10.1	Women's clothing manufacture.....	+39.0	-----
Textiles.....	-3.8	-5.8	Brick, tile, and terra cotta.....	-20.2	-----
Silk and silk goods.....	-16.4	-25.4	Foundries and machine shops.....	-60.7	-----
Wool manufactures.....	-1.2	+7.0	Structural-iron works.....	-27.4	-----
Cotton goods.....	+45.9	+60.2	Railroad-car shops.....	-11.7	-----
Knit goods (excluding silk).....	+5.0	-9	Electric-railway car shops.....	-9.5	-----
Other textiles.....	-17.9	-21.6	Petroleum refining.....	-14.3	-----
Clothing and millinery.....	-6.7	-11.3	Sawmills.....	-50.8	-----
Men's clothing.....	-11.1	-14.9	Lumber mills.....	-8.9	-----
Men's furnishings.....	-5.2	-6.4	Furniture manufacture.....	-7.1	-----
Women's clothing.....	-4.8	-12.3	Paper-box manufacture.....	-10.7	-----
Women's underwear.....	-7.1	-14.3	Cotton-textile mills.....	-41.3	-----
Women's headwear.....	+3.5	-5.8	Cement plants.....	-1.2	-----
Miscellaneous sewing.....	-19.5	-21.8	Commercial printing.....	-5.4	-----
Laundry and cleaning.....	-1.0	-1.5	Newspaper publishing.....	-5.1	-----
			Quarrying.....	+1.7	-----
			Public utilities.....	-12.0	-----
			Retail stores.....	-3.3	-----
			Wholesale stores.....	-8.4	-----
			Hotels.....	-8.6	-----
			Restaurants.....	-15.4	-----
			All industries.....	-17.7	-----

WHOLESALE AND RETAIL PRICES

Retail Prices of Food in July, 1931

THE following tables are compiled from simple averages of the actual selling prices¹ received monthly by the Bureau of Labor Statistics from retail dealers.

Table 1 shows for the United States retail prices of food July 15, 1930, and June 15 and July 15, 1931, as well as the percentage changes in the year and in the month. For example, the retail price per pound of pork chops was 36.5 cents on July 15, 1930; 29.4 cents on June 15, 1931; and 31.8 cents on July 15, 1931. These figures show a decrease of 13 per cent in the year and an increase of 8 per cent in the month.

The cost of various articles of food combined shows a decrease of 17.5 per cent July 15, 1931, as compared with July 15, 1930, and an increase of 0.5 per cent July 15, 1931, as compared with June 15, 1931.

TABLE 1.—AVERAGE RETAIL PRICES OF SPECIFIED FOOD ARTICLES AND PER CENT OF INCREASE OR DECREASE JULY 15, 1931, COMPARED WITH JUNE 15, 1931, AND JULY 15, 1930

[Percentage changes of five-tenths of 1 per cent and over are given in whole numbers]

Article	Unit	Average retail price on—			Per cent of increase (+) or decrease (−) July 15, 1931, compared with—	
		July 15, 1930	June 15, 1931	July 15, 1931	July 15, 1930	June 15, 1931
		<i>Cents</i>	<i>Cents</i>	<i>Cents</i>		
Sirloin steak.....	Pound.....	46.3	38.7	39.2	−15	+1
Round steak.....	do.....	41.1	33.7	34.4	−16	+2
Rib roast.....	do.....	34.0	28.3	28.3	−17	0
Chuck roast.....	do.....	26.6	20.9	20.8	−22	−1
Plate beef.....	do.....	18.1	13.6	13.4	−26	−1
Pork chops.....	do.....	36.5	29.4	31.8	−13	+8
Bacon, sliced.....	do.....	42.3	36.9	37.0	−13	+0.3
Ham, sliced.....	do.....	53.8	45.9	46.1	−14	+0.4
Lamb, leg of.....	do.....	35.7	30.6	30.0	−16	−2
Hens.....	do.....	34.4	31.1	30.8	−10	−1
Salmon, red, canned.....	do.....	31.9	33.6	33.4	+5	−1
Milk, fresh.....	Quart.....	14.0	12.0	12.1	−14	+1
Milk, evaporated.....	16-oz. can.....	10.0	9.2	9.2	−8	0
Butter.....	Pound.....	43.7	30.9	31.8	−27	+3
Oleomargarine (all butter substitutes).....	do.....	25.7	19.0	18.4	−28	−3
Cheese.....	do.....	34.3	26.5	26.2	−24	−1
Lard.....	do.....	16.3	13.0	13.0	−20	0
Vegetable lard substitute.....	do.....	24.3	23.3	23.2	−5	−0.4
Eggs, strictly fresh.....	Dozen.....	35.1	25.8	28.6	−19	+11
Bread.....	Pound.....	8.8	7.6	7.5	−15	−1

¹ In addition to monthly retail prices of food and coal, the bureau publishes periodically the prices of gas and electricity for household use in each of 51 cities. At present this information is being collected in June and December of each year.

TABLE 1.—AVERAGE RETAIL PRICES OF SPECIFIED FOOD ARTICLES AND PER CENT OF INCREASE OR DECREASE JULY 15, 1931, COMPARED WITH JUNE 15, 1931, AND JULY 15, 1930—Continued

Article	Unit	Average retail price on—			Per cent of increase (+) or decrease (–) July 15, 1931, compared with—	
		July 15, 1930	June 15, 1931	July 15, 1931	July 15, 1930	June 15, 1931
		<i>Cents</i>	<i>Cents</i>	<i>Cents</i>		
Flour.....	Pound.....	4.6	3.7	3.6	–22	–3
Corn meal.....	do.....	5.3	4.5	4.5	–15	0
Rolled oats.....	do.....	8.7	8.0	8.0	–8	0
Corn flakes.....	8-oz. package.....	9.4	8.9	8.8	–6	–1
Wheat cereal.....	28-oz. package.....	25.4	24.0	23.9	–6	–0.4
Macaroni.....	Pound.....	19.3	16.9	16.6	–14	–2
Rice.....	do.....	9.5	8.2	8.1	–15	–1
Beans, navy.....	do.....	11.5	8.0	7.9	–31	–1
Potatoes.....	do.....	3.3	2.4	2.3	–30	–4
Onions.....	do.....	5.8	4.8	4.9	–16	+2
Cabbage.....	do.....	4.4	4.0	3.7	–16	–8
Pork and beans.....	No. 2 can.....	11.0	10.3	10.3	–6	0
Corn, canned.....	do.....	15.3	13.3	13.2	–14	–1
Peas, canned.....	do.....	16.2	13.9	13.9	–14	0
Tomatoes, canned.....	do.....	12.4	10.1	10.1	–19	0
Sugar.....	Pound.....	6.1	5.6	5.6	–8	0
Tea.....	do.....	77.6	74.4	74.6	–4	+0.3
Coffee.....	do.....	40.4	33.1	32.5	–20	–2
Prunes.....	do.....	16.5	11.8	11.8	–28	0
Raisins.....	do.....	11.9	11.1	11.3	–5	+2
Bananas.....	Dozen.....	30.6	26.1	25.6	–16	–2
Oranges.....	do.....	64.0	37.6	38.0	–41	+1
Weighted food index.....	.....	.....	.....	.....	–17.5	+0.5

Table 2 shows for the United States average retail prices of specified food articles on July 15, 1913, and on July 15 of each year from 1925 to 1931, together with percentage changes in July of each of these specified years compared with July, 1913. For example, the retail price per pound of lard was 15.9 cents in July, 1913; 23.5 cents in July, 1925; 22.9 cents in July, 1926; 18.8 cents in July, 1927; 18.4 cents in July, 1928; 18.3 cents in July, 1929; 16.3 cents in July, 1930; and 13.0 cents in July, 1931.

As compared with July, 1913, these figures show increases of 48 per cent in July, 1925; 44 per cent in July, 1926; 18 per cent in July, 1927; 16 per cent in July, 1928; 15 per cent in July, 1929; and 3 per cent in July, 1930. In July, 1931, there was a decrease of 18 per cent as compared with July, 1913.

The cost of the various articles of food combined showed an increase of 19.5 per cent in July, 1931, as compared with July, 1913.

TABLE 2.—AVERAGE RETAIL PRICES OF SPECIFIED FOOD ARTICLES AND PER CENT OF INCREASE JULY 15 OF CERTAIN SPECIFIED YEARS COMPARED WITH JULY 15, 1913

[Percentage changes of five-tenths of 1 per cent and over are given in whole numbers]

Article	Average retail prices on July 15—								Per cent of increase July 15 of each specified year compared with July 15, 1913							
	1913	1925	1926	1927	1928	1929	1930	1931	1925	1926	1927	1928	1929	1930	1931	
	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.								
Sirloin steak... pound	26.4	42.2	42.0	43.6	49.7	52.5	46.3	39.2	60	59	65	88	99	75	48	
Round steak... do	23.2	36.5	36.3	37.9	43.9	47.0	41.1	34.4	57	56	63	89	103	77	48	
Rib roast... do	20.2	30.4	30.7	31.7	36.0	38.2	34.0	28.3	50	52	57	78	89	68	40	
Chuck roast... do	16.4	22.4	22.7	23.9	28.9	31.3	26.6	20.8	37	38	46	76	91	62	27	
Plate beef... do	12.2	14.0	14.5	15.3	19.1	21.5	18.1	13.4	15	19	25	57	76	48	10	
Pork chops... do	21.7	39.2	41.7	34.9	37.3	39.5	36.5	31.8	81	92	61	72	82	68	47	
Bacon, sliced... do	28.0	48.7	52.3	46.6	43.9	44.3	42.3	37.0	74	87	66	57	58	51	32	
Ham, sliced... do	28.1	54.4	60.9	54.6	53.4	56.4	53.8	46.1	94	117	94	90	101	91	64	
Lamb, leg of... do	19.7	39.3	40.3	40.3	41.1	41.1	35.7	30.0	99	105	105	109	109	81	52	
Hens... do	21.7	36.6	39.2	35.6	36.7	39.9	34.4	30.8	69	81	64	69	84	59	42	
Salmon, red, canned																
pound		31.5	38.1	32.3	35.3	31.5	31.9	33.4								
Milk, fresh... quart	8.8	13.8	13.8	14.0	14.1	14.3	14.0	12.1	57	57	59	60	63	59	38	
Milk, evaporated																
16-ounce can		11.4	11.1	11.5	11.1	10.9	10.0	9.2								
Butter... pound	34.8	53.2	50.1	51.4	54.3	53.4	43.7	31.8	53	44	48	56	53	26	19	
Oleomargarine (all																
butter substitutes)																
pound		29.9	30.2	28.0	27.2	27.2	25.7	18.4								
Cheese... do	21.9	36.6	35.6	36.9	38.3	37.9	34.3	26.2	67	63	68	75	73	57	20	
Lard... do	15.9	23.5	22.9	18.8	18.4	18.3	16.3	13.0	48	44	18	16	15	3	18	
Vegetable lard substit-																
ute... pound		25.8	25.9	25.0	24.9	24.8	24.3	23.2								
Eggs, strictly fresh																
dozen	29.9	46.2	42.1	36.9	41.6	44.1	35.1	28.6	55	41	23	39	47	17	14	
Bread... pound	5.6	9.4	9.4	9.3	9.2	9.0	8.8	7.5	68	68	66	64	61	57	34	
Flour... do	3.3	6.1	6.0	5.5	5.6	5.0	4.6	3.6	85	82	67	70	52	39	9	
Corn meal... do	3.0	5.4	5.1	5.2	5.3	5.3	5.3	4.5	80	70	73	77	77	77	50	
Rolled oats... do		9.2	9.1	9.0	8.9	8.8	8.7	8.0								
Corn flakes																
8-ounce package		11.1	10.9	9.8	9.5	9.5	9.4	8.8								
Wheat cereal																
28-ounce package		24.6	25.4	25.4	25.6	25.5	25.4	23.9								
Macaroni... pound		20.5	20.2	20.0	19.8	19.7	19.3	16.6								
Rice... do	8.7	11.2	11.7	10.7	10.0	9.7	9.5	8.1	29	34	23	15	11	9	17	
Beans, navy... do		10.3	9.2	9.4	12.5	14.3	11.5	7.9								
Potatoes... do	1.9	4.4	4.1	4.2	2.3	3.9	3.3	2.3	132	116	121	21	105	74	21	
Onions... do		9.5	6.8	7.8	5.9	7.0	5.8	4.9								
Cabbage... do		6.5	5.1	5.5	4.3	4.8	4.4	3.7								
Pork and beans																
No. 2 can		12.4	11.9	11.5	11.5	11.9	11.0	10.3								
Corn, canned... do		18.3	16.4	15.5	15.9	15.8	15.3	13.2								
Peas, canned... do		18.4	17.4	16.7	16.8	16.6	16.2	13.9								
Tomatoes, canned																
No. 2 can		13.7	11.8	12.0	11.6	13.8	12.4	10.1								
Sugar, granulated																
pound	5.5	7.1	6.9	7.4	7.3	6.4	6.1	5.6	29	27	35	33	16	11	2	
Tea... do	54.4	75.8	77.0	77.5	77.4	77.4	77.6	74.6	39	42	42	42	42	43	37	
Coffee... do	29.8	50.8	51.1	47.6	49.2	49.4	40.4	32.5	70	71	60	65	66	36	9	
Prunes... do		17.3	17.2	15.7	13.8	14.7	16.5	11.8								
Raisins... do		14.5	14.8	14.4	13.6	11.7	11.9	11.3								
Bananas... dozen		36.2	35.2	33.4	32.1	32.1	30.6	25.6								
Oranges... do		61.2	49.6	50.2	62.6	44.9	64.0	38.0								
All articles combined ²									60.5	57.7	54.0	53.5	59.2	44.7	19.5	

¹ Decrease.² Beginning with January, 1921, index numbers showing the trend in the retail cost of food have been composed of the articles shown in Tables 1 and 2, weighted according to the consumption of the average family. From January, 1913, to December, 1920, the index numbers included the following articles: Sirloin steak, round steak, rib roast, chuck roast, plate beef, pork chops, bacon, ham, lard, hens, flour, corn meal, eggs, butter, milk, bread, potatoes, sugar, cheese, rice, coffee, and tea.

Table 3 shows the trend in the retail cost of three important groups of food commodities, viz, cereals, meats, and dairy products, by years,

from 1913 to 1930, and by months for 1929, 1930, and 1931. The articles within these groups are as follows:

Cereals: Bread, flour, corn meal, rice, rolled oats, corn flakes, wheat cereal, and macaroni.

Meats: Sirloin steak, round steak, rib roast, chuck roast, plate beef, pork chops, bacon, ham, hens, and leg of lamb.

Dairy products: Butter, cheese, fresh milk, and evaporated milk.

TABLE 3.—INDEX NUMBERS OF RETAIL COST OF CEREALS, MEATS, AND DAIRY PRODUCTS FOR THE UNITED STATES, 1913 TO JULY, 1931

[Average cost in 1913=100.0]

Year and month	Cereals	Meats	Dairy products	Year and month	Cereals	Meats	Dairy products
1913: Average for year	100.0	100.0	100.0	1929—Continued.			
1914: Average for year	106.7	103.4	97.1	October	163.5	189.2	149.1
1915: Average for year	121.6	99.6	96.1	November	163.6	184.1	147.0
1916: Average for year	126.8	108.2	103.2	December	162.9	181.8	144.9
1917: Average for year	186.5	137.0	127.6	1930: Average for year	158.0	175.8	136.1
1918: Average for year	194.3	172.8	153.4	January	162.9	183.6	138.9
1919: Average for year	198.0	184.2	176.6	February	161.6	183.1	138.5
1920: Average for year	232.1	185.7	185.1	March	160.9	183.0	137.4
1921: Average for year	179.8	158.1	149.5	April	160.3	183.3	138.9
1922: Average for year	159.3	150.3	135.9	May	159.8	181.5	137.0
1923: Average for year	156.9	149.0	147.6	June	160.1	179.9	133.7
1924: Average for year	160.4	150.2	142.8	July	158.6	175.2	133.6
1925: Average for year	176.2	163.0	147.1	August	156.9	169.9	137.4
1926: Average for year	175.5	171.3	145.5	September	156.4	173.3	138.8
1927: Average for year	170.7	169.9	148.7	October	154.4	171.1	137.8
1928: Average for year	167.2	179.2	150.0	November	152.4	164.0	135.1
1929: Average for year	164.1	188.4	148.6	December	151.6	161.6	129.8
January	164.1	180.9	151.9	1931:			
February	164.1	180.3	152.6	January	147.1	159.5	123.6
March	164.1	182.8	152.4	February	144.6	153.4	120.2
April	164.1	187.5	148.9	March	142.4	152.5	120.5
May	163.5	191.2	147.5	April	138.9	151.4	116.5
June	163.0	192.4	146.8	May	137.7	149.3	110.3
July	163.5	195.9	146.8	June	136.3	145.7	108.1
August	164.7	196.0	147.1	July	134.3	147.8	109.7
September	165.2	194.2	148.1				

Index Numbers of Retail Prices of Food in the United States

IN TABLE 4 index numbers are given which show the changes in the retail prices of specified food articles, by years, for 1913 and 1920 to 1930,² by months for 1930 and 1931. These index numbers, or relative prices, are based on the year 1913 as 100.0, and are computed by dividing the average price of each commodity for each month and each year by the average price of that commodity for 1913. These figures must be used with caution. For example, the relative price of sirloin steak for the year 1930 was 182.7, which means that the average money price for the year 1930 was 82.7 per cent higher than the average money price for the year 1913. As compared with the relative price, 196.9 in 1929, the figures for 1930 show a decrease of 14.2 points, but a decrease of 7.2 per cent in the year.

In the last column of Table 4 are given index numbers showing changes in the retail cost of all articles of food combined. Since January, 1921, these index numbers have been computed from the average prices of the articles of food shown in Tables 1 and 2, weighted according to the average family consumption in 1918. (See March, 1921, issue, p. 25.) Although previous to January, 1921, the number of food articles varied, these index numbers have been so computed

² For index numbers of each month, January, 1913, to December, 1928, see Bulletin No. 396, pp. 44 to 61; and Bulletin No. 495, pp. 32 to 45. Index numbers for 1929 are published in each Labor Review, February, 1930, to February, 1931.

as to be strictly comparable for the entire period. The index numbers based on the average for the year 1913 as 100.0 are 118.3 for June, 1931, and 119.0 for July, 1931.

TABLE 4.—INDEX NUMBERS OF RETAIL PRICES OF PRINCIPAL ARTICLES OF FOOD BY YEARS, 1913, 1920 TO 1930, AND BY MONTHS FOR 1930 AND 1931

[Average for year 1913=100.0]

Year and month	Sirloin steak	Round steak	Rib roast	Chuck roast	Plate beef	Pork chops	Bacon	Ham	Lamb, leg of	Hens	Milk	Butter
1913	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1920	172.1	177.1	167.7	163.8	151.2	201.4	193.7	206.3	207.9	209.9	187.6	183.0
1921	152.8	154.3	147.0	132.5	118.2	166.2	158.2	181.4	178.3	186.4	164.0	135.0
1922	147.2	144.8	139.4	123.1	105.8	157.1	147.4	181.4	193.7	169.0	147.2	125.1
1923	153.9	150.2	143.4	126.3	106.6	144.8	144.8	169.1	194.2	164.3	155.1	144.7
1924	155.9	151.6	145.5	130.0	109.1	146.7	139.6	168.4	196.3	165.7	155.1	135.0
1925	159.8	155.6	149.5	135.0	114.1	174.3	173.0	195.5	204.2	171.8	157.3	143.1
1926	162.6	159.6	153.0	140.6	120.7	188.1	186.3	213.4	206.3	182.2	157.3	138.6
1927	167.7	166.4	158.1	148.1	127.3	175.2	174.8	204.5	205.8	173.2	158.4	145.2
1928	188.2	188.3	176.8	174.4	157.0	165.7	163.0	196.7	208.5	175.6	159.6	147.5
1929	196.9	199.1	185.4	186.9	172.7	175.7	161.1	204.1	212.2	186.4	160.7	143.9
1930	182.7	184.8	172.7	170.0	155.4	171.0	156.7	198.5	185.7	166.7	157.3	120.4
1931:	192.9	195.5	183.3	184.4	172.7	168.1	157.0	199.3	206.9	178.4	159.6	121.9
January	191.3	194.2	181.8	184.4	171.9	167.6	157.8	200.7	201.6	179.3	158.4	122.7
February	190.6	192.8	181.3	182.5	170.2	171.9	157.8	201.1	193.7	179.8	157.3	121.9
March	190.2	193.3	181.3	182.5	168.6	176.7	157.4	200.4	189.4	179.3	157.3	125.6
April	190.2	192.8	179.8	179.4	164.5	171.9	156.7	200.7	189.9	175.6	157.3	120.9
May	188.6	191.5	177.3	175.6	160.3	174.3	156.7	200.7	193.7	167.6	157.3	113.1
June	182.3	184.3	171.7	166.3	149.6	173.8	156.7	200.0	188.9	161.5	157.3	114.1
July	175.6	176.7	163.1	155.6	138.8	174.8	155.6	198.1	178.3	158.7	157.3	123.8
August	177.2	178.0	166.7	160.0	142.1	186.2	158.1	198.9	179.9	159.6	157.3	127.2
September	175.2	176.2	164.1	158.7	142.1	180.5	157.8	197.4	173.5	158.7	157.3	124.8
October	170.5	170.9	160.6	154.4	139.7	156.2	155.9	193.7	166.1	153.1	157.3	118.5
November	168.9	169.1	159.6	153.8	139.7	149.5	153.0	191.4	164.6	150.2	151.7	111.0
December	167.3	168.2	159.1	152.5	138.0	141.9	148.9	188.1	166.1	153.5	149.4	98.4
1931:	161.4	161.0	154.0	145.6	131.4	131.4	145.2	183.3	164.6	148.8	146.1	94.8
January	158.7	157.8	153.0	141.9	128.1	140.0	143.0	178.4	164.0	150.2	144.9	97.4
February	157.5	156.5	150.0	139.4	124.8	141.4	141.1	175.5	165.6	153.1	141.6	91.9
March	155.5	154.7	147.0	135.6	119.8	143.3	139.3	172.9	165.1	148.8	138.2	81.5
April	152.4	151.1	142.9	130.6	112.4	140.0	136.7	170.6	161.9	146.0	134.8	80.7
May	154.3	154.3	142.9	130.0	110.7	151.4	137.0	171.4	158.7	144.6	136.0	83.0
June												
July												

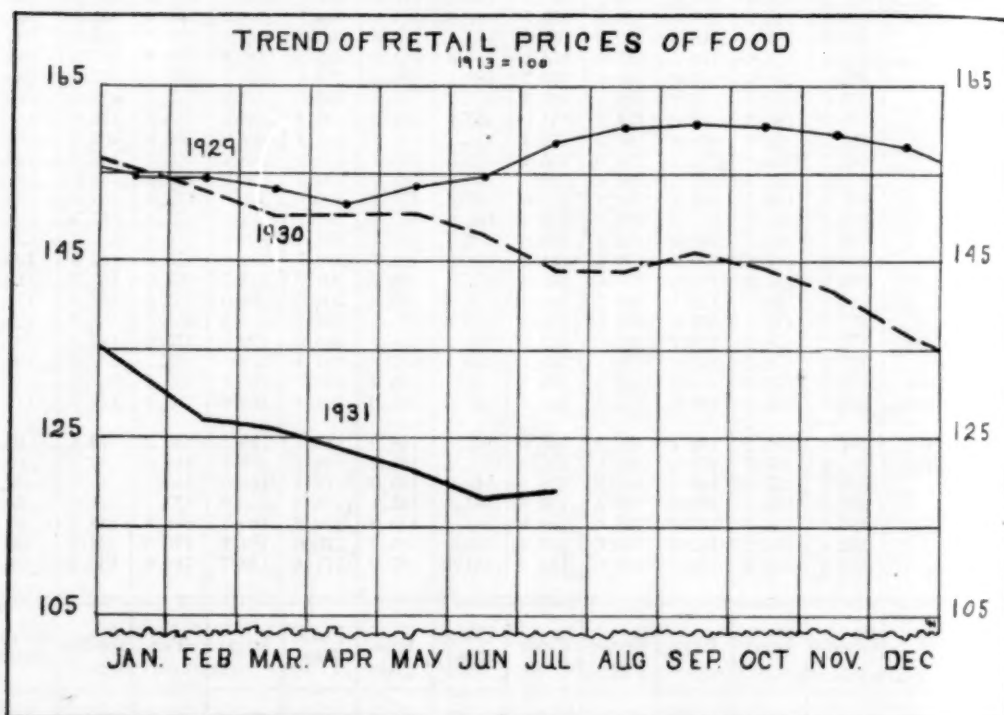
Year and month	Cheese	Lard	Eggs	Bread	Flour	Corn meal	Rice	Pota-toes	Sugar	Tea	Coffee	All ar-ticles 1
1913	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1920	188.2	186.7	197.4	205.4	245.5	216.7	200.0	370.6	352.7	134.7	157.7	203.4
1921	153.9	113.9	147.5	176.8	175.8	150.0	109.2	182.4	145.5	128.1	121.8	153.3
1922	148.9	107.6	128.7	155.4	154.5	130.0	109.2	164.7	132.7	125.2	121.1	141.6
1923	167.0	112.0	134.8	155.4	142.4	136.7	109.2	170.6	183.6	127.8	162.5	146.2
1924	159.7	120.3	138.6	157.1	148.5	156.7	116.1	158.8	167.3	131.4	145.3	145.9
1925	166.1	147.5	151.0	167.9	184.8	180.0	127.6	211.8	130.9	138.8	172.8	157.4
1926	165.6	138.6	140.6	167.9	181.8	170.0	133.3	288.2	125.5	141.0	171.1	160.6
1927	170.1	122.2	131.0	166.1	166.7	173.3	123.0	223.5	132.7	142.5	162.1	155.4
1928	174.2	117.7	134.5	162.5	163.6	176.7	114.9	158.8	129.1	142.3	165.1	154.3
1929	171.9	115.8	142.0	160.7	154.5	176.7	111.5	188.2	120.0	142.6	164.8	156.7
1930	158.8	107.6	118.8	155.4	142.4	176.7	109.2	211.8	112.7	142.5	136.2	147.1
1931:	169.2	108.9	160.6	158.9	154.5	180.0	110.3	229.4	120.0	143.4	147.0	155.4
January	167.0	108.2	136.8	157.1	154.5	176.7	110.3	229.4	118.2	143.2	143.3	153.0
February	164.7	107.0	102.3	157.1	151.5	176.7	109.2	229.4	116.4	142.8	140.6	150.1
March	162.9	106.3	100.0	157.1	148.5	176.7	110.3	241.2	114.5	142.5	138.9	151.2
April	162.0	105.7	97.7	157.1	145.5	176.7	109.2	252.9	114.5	142.5	137.2	150.1
May	157.9	105.1	97.4	157.1	145.5	176.7	109.2	247.1	110.9	143.0	136.2	147.9
June	155.2	103.2	101.7	157.1	139.4	176.7	109.2	194.1	110.9	142.6	135.6	144.0
July	153.4	104.4	112.5	155.4	136.4	176.7	109.2	182.4	110.9	142.3	134.6	143.7
August	154.8	110.8	124.9	155.4	133.3	176.7	110.3	188.2	107.3	142.1	132.6	145.6
September	154.8	112.0	129.9	153.6	130.3	176.7	109.2	182.4	105.5	141.9	131.2	144.4
October	152.9	110.8	140.3	151.8	127.3	173.3	106.9	170.6	107.3	141.4	129.9	141.4
November	150.2	105.7	120.6	151.8	124.2	173.3	105.8	170.6	107.3	141.4	129.2	137.2
December	145.2	99.4	104.6	146.4	121.2	170.0	102.3	170.6	107.3	141.0	126.8	132.8
1931:	141.2	91.8	78.8	142.9	121.2	166.7	102.3	158.8	107.3	140.6	125.2	127.0
January	137.1	89.9	82.6	141.1	118.2	166.7	98.9	158.8	105.5	139.7	121.8	126.4
February	132.6	89.9	79.4	137.5	115.2	163.3	96.6	164.7	103.6	138.2	116.1	124.0
March	124.0	85.4	71.9	137.5	112.1	153.3	95.4	164.7	101.8	136.9	112.4	121.0
April	119.9	82.3	74.8	135.7	112.1	150.0	94.3	141.2	101.8	136.8	111.1	118.3
May	118.6	82.3	82.9	133.9	109.1	150.0	93.1	135.3	101.8	137.1	109.1	119.0
June												
July												

22 articles in 1913-1920; 42 articles in 1921-1931.

The curve shown in the chart below pictures more readily to the eye the changes in the cost of the food budget than do the index numbers given in the table.

Comparison of Retail Food Costs in 51 Cities

TABLE 5 shows for 39 cities the percentage of increase or decrease in the retail cost of food³ July, 1931, compared with the average cost in the year 1913, in July, 1930, and June, 1931. For 12 other cities comparisons are given for the 1-year and the 1-month periods; these cities have been scheduled by the bureau at different dates since 1913. The percentage changes are based on actual retail prices



secured each month from retail dealers and on the average consumption of these articles in each city.⁴

Effort has been made by the bureau each month to have all schedules for each city included in the average prices. For the month of July, 99 per cent of all the firms supplying retail prices in the 51 cities sent in a report promptly. The following-named 35 cities had a perfect record; that is, every merchant who is cooperating with the bureau sent in his report in time for his prices to be included in the city averages: Atlanta, Baltimore, Birmingham, Bridgeport, Buffalo, Chicago, Cincinnati, Cleveland, Columbus, Dallas, Detroit, Fall River, Houston, Indianapolis, Jacksonville, Los Angeles, Louisville, Manchester, Memphis, Mobile, Newark, New Haven, New York, Norfolk, Omaha, Peoria, Philadelphia, Providence, Richmond, Rochester, St. Paul, Salt Lake City, Scranton, Springfield (Ill.), and Washington.

³ For list of articles see note 2, p. 237.

⁴ The consumption figures used for January, 1913, to December, 1920, for each article in each city are given in the Labor Review for November, 1918, pp. 94 and 95. The consumption figures which have been used for each month, beginning with January, 1921, are given in the Labor Review for March, 1921, p. 23.

TABLE 5.—PERCENTAGE CHANGE IN THE RETAIL COST OF FOOD IN JULY, 1931, COMPARED WITH THE COST IN JUNE, 1931, JULY, 1930, AND WITH THE AVERAGE COST IN THE YEAR 1913, BY CITIES

City	Percent- age in- crease July, 1931, com- pared with 1913	Percent- age de- crease July, 1931, com- pared with July, 1930	Percent- age in- crease July, 1931, com- pared with June, 1931	City	Percent- age in- crease July, 1931, com- pared with 1913	Percent- age de- crease July, 1931, com- pared with July, 1930	Percent- age in- crease July, 1931, com- pared with June, 1931
United States.....	19.0	17.5	0.5	Milwaukee.....	23.7	15.0	1.6
Atlanta.....	19.6	18.1	1.2	Minneapolis.....	23.9	13.6	2.4
Baltimore.....	23.8	16.6	.6	Mobile.....		19.2	1.2
Birmingham.....	16.1	22.4	1.5	Newark.....	21.0	13.2	1.0
Boston.....	21.4	18.4	1.1	New Haven.....	24.8	14.6	.8
Bridgeport.....		15.3	1.7	New Orleans.....	14.3	20.0	1.9
Buffalo.....	21.3	17.1	.2	New York.....	25.7	14.3	.7
Butte.....		16.0	1.1	Norfolk.....		18.1	1.8
Charleston, S C.....	23.3	17.3	.0	Omaha.....	14.8	15.5	.7
Chicago.....	32.2	15.2	1.7	Peoria.....		19.5	.8
Cincinnati.....	26.8	16.9	.9	Philadelphia.....	26.3	12.6	.0
Cleveland.....	13.3	19.8	.5	Pittsburgh.....	19.8	16.3	.2
Columbus.....		19.2	1.8	Portland, Me.....		14.9	2.7
Dallas.....	11.8	22.3	1.4	Portland, Oreg.....	8.2	17.2	1.0
Denver.....	10.3	15.5	1.6	Providence.....	19.8	18.1	1.6
Detroit.....	17.6	19.9	1.5	Richmond.....	21.1	18.8	1.8
Fall River.....	15.6	19.1	1.0	Rochester.....		18.8	.5
Houston.....		20.9	.0	St. Louis.....	23.1	14.9	1.1
Indianapolis.....	15.1	20.4	2.1	St. Paul.....		13.7	2.0
Jacksonville.....	11.3	19.0	1.3	Salt Lake City.....	5.7	15.7	1.3
Kansas City.....	19.1	12.4	1.6	San Francisco.....	20.9	15.9	.0
Little Rock.....	10.4	21.2	.3	Savannah.....		20.8	1.2
Los Angeles.....	5.8	19.2	.4	Scranton.....	25.1	17.6	1.3
Louisville.....	12.4	19.1	.5	Seattle.....	15.1	17.0	1.4
Manchester.....	19.8	16.6	1.0	Springfield, Ill.....		20.9	.6
Memphis.....	9.0	21.5	1.5	Washington.....	28.5	14.8	.6

1 Decrease.

Retail Prices of Coal in July, 1931¹

THE following table shows the average retail prices of coal on July 15, 1930, and June 15 and July 15, 1931, for the United States and for each of the cities from which retail food prices have been obtained. The prices quoted are for coal delivered to consumers but do not include charges for storing the coal in cellar or coal bin where an extra handling is necessary.

In addition to the prices for Pennsylvania anthracite, prices are shown for Colorado, Arkansas, and New Mexico anthracite in those cities where these coals form any considerable portion of the sales for household use.

The prices shown for bituminous coal are averages of prices of the several kinds sold for household use.

AVERAGE RETAIL PRICES OF COAL PER TON OF 2,000 POUNDS, FOR HOUSEHOLD USE, ON JULY 15, 1930, AND JUNE 15 AND JULY 15, 1931

City, and kind of coal	1930, July 15	1931		City, and kind of coal	1930, July 15	1931	
		June 15	July 15			June 15	July 15
United States:				Cincinnati, Ohio:			
Pennsylvania anthracite—				Bituminous—			
Stove—				Prepared sizes—			
Average price.....	\$14.84	\$14.33	\$14.61	High volatile.....	\$5.80	\$5.30	\$5.30
Index (1913=100).....	192.1	185.5	189.1	Low volatile.....	7.75	7.28	7.28
Chestnut—				Cleveland, Ohio:			
Average price.....	\$14.53	\$14.31	\$14.59	Pennsylvania anthracite—			
Index (1913=100).....	183.6	180.8	184.3	Stove.....	14.56	14.00	14.06
Bituminous—				Chestnut.....	14.31	14.00	13.94
Average price.....	\$8.65	\$8.00	\$8.09	Bituminous—			
Index (1923=100).....	159.1	147.3	148.9	Prepared sizes—			
Atlanta, Ga.:				High volatile.....	6.75	6.58	6.53
Bituminous, prepared sizes.	\$7.14	\$6.69	\$6.67	Low volatile.....	9.25	8.57	8.79
Baltimore, Md.:				Columbus, Ohio:			
Pennsylvania anthracite—				Bituminous—			
Stove.....	14.00	13.25	13.50	Prepared sizes—			
Chestnut.....	13.50	13.00	13.25	High volatile.....	5.79	5.36	5.54
Bituminous, run of mine—				Low volatile.....	7.19	7.00	6.75
High volatile.....	7.61	7.61	7.61	Dallas, Tex.:			
Birmingham, Ala.:				Arkansas anthracite—Egg..	14.25	14.50	13.50
Bituminous, prepared sizes.	6.96	6.35	6.36	Bituminous, prepared sizes.	12.17	12.25	11.92
Boston, Mass.:				Denver, Colo.:			
Pennsylvania anthracite—				Colorado anthracite—			
Stove.....	15.50	14.75	14.95	Furnace, 1 and 2 mixed..	14.94	15.13	15.13
Chestnut.....	15.00	14.69	14.95	Stove, 3 and 5 mixed.....	14.94	15.13	15.13
Bridgeport, Conn.:				Bituminous, prepared sizes.	9.89	8.24	8.23
Pennsylvania anthracite—				Detroit, Mich.:			
Stove.....	14.50	14.00	14.00	Pennsylvania anthracite—			
Chestnut.....	14.50	14.00	14.00	Stove.....	14.25	14.50	14.50
Buffalo, N. Y.:				Chestnut.....	14.25	14.50	14.50
Pennsylvania anthracite—				Bituminous—			
Stove.....	13.42	12.80	13.00	Prepared sizes—			
Chestnut.....	12.92	12.80	13.00	High volatile.....	8.09	6.97	7.03
Butte, Mont.:				Low volatile.....	9.46	8.06	7.94
Bituminous, prepared sizes.	11.09	10.47	10.49	Run of mine—			
Charleston, S. C.:				Low volatile.....	7.67	7.13	7.13
Bituminous, prepared sizes.	9.67	9.67	9.67	Fall River, Mass.:			
Chicago, Ill.:				Pennsylvania anthracite—			
Pennsylvania anthracite—				Stove.....	16.00	15.25	15.25
Stove.....	16.38	16.00	16.25	Chestnut.....	15.75	15.25	15.25
Chestnut.....	15.93	16.00	16.25	Houston, Tex.:			
Bituminous—				Bituminous, prepared sizes.	11.60	10.20	10.20
Prepared sizes—				Indianapolis, Ind.:			
High volatile.....	7.78	7.45	7.54	Bituminous—			
Low volatile.....	10.29	10.14	10.36	Prepared sizes—			
Run of mine—				High volatile.....	5.80	5.84	5.82
Low volatile.....	7.75	7.23	7.23	Low volatile.....	8.21	7.75	8.25
				Run of mine—			
				Low volatile.....	6.90	6.65	6.70

¹ Prices of coal were formerly secured semiannually and published in the March and September issues of the Labor Review. Since June, 1920, these prices have been secured and published monthly.

AVERAGE RETAIL PRICES OF COAL PER TON OF 2,000 POUNDS, FOR HOUSEHOLD USE, ON JULY 15, 1930, AND JUNE 15 AND JULY 15, 1931—Continued

City, and kind of coal	1930, July 15	1931		City, and kind of coal	1930, July 15	1931	
		June 15	July 15			June 15	July 15
Jacksonville, Fla.: Bituminous, prepared sizes	\$12.00	\$10.00	\$10.00	Pittsburgh, Pa.: Pennsylvania anthracite— Chestnut	\$14.75	\$14.25	\$14.00
Kansas City, Mo.: Arkansas anthracite— Furnace	12.00	11.69	11.38	Bituminous, prepared sizes	5.11	4.64	4.86
Stove No. 4	12.75	13.00	12.50	Portland, Me.: Pennsylvania anthracite— Stove	16.56	16.32	16.32
Bituminous, prepared sizes	7.04	6.69	6.27	Chestnut	16.56	16.32	16.32
Little Rock, Ark.: Arkansas anthracite—Egg	12.50	12.50	12.00	Portland, Oreg.: Bituminous, prepared sizes	13.09	12.43	12.54
Bituminous, prepared sizes	9.20	9.17	9.00	Providence, R. I.: Pennsylvania anthracite— Stove	15.75	15.25	15.25
Los Angeles, Calif.: Bituminous, prepared sizes	16.25	15.75	15.50	Chestnut	15.75	15.25	15.25
Louisville, Ky.: Bituminous— Prepared sizes— High volatile	6.18	4.88	5.08	Richmond, Va.: Pennsylvania anthracite— Stove	14.50	13.50	14.00
Low volatile	8.50	7.50	7.75	Chestnut	14.50	13.50	14.00
Manchester, N. H.: Pennsylvania anthracite— Stove	16.50	15.50	16.00	Bituminous— Prepared sizes— High volatile	8.25	7.25	7.67
Chestnut	16.50	15.50	16.00	Low volatile	8.37	7.83	8.31
Memphis, Tenn.: Bituminous, prepared sizes	7.85	6.91	7.03	Run of mine	6.75	6.75	6.75
Milwaukee, Wis.: Pennsylvania anthracite— Stove	15.75	15.39	15.65	Low volatile	6.75	6.75	6.75
Chestnut	15.30	15.39	15.61	Rochester, N. Y.: Pennsylvania anthracite— Stove	14.45	13.78	13.78
Bituminous— Prepared sizes— High volatile	7.68	7.45	7.45	Chestnut	13.95	13.78	13.78
Low volatile	10.43	9.54	9.75	St. Louis, Mo.: Pennsylvania anthracite— Stove	16.25	15.63	16.47
Minneapolis, Minn.: Pennsylvania anthracite— Stove	17.75	17.41	17.61	Chestnut	16.00	15.50	16.47
Chestnut	17.30	17.41	17.61	Bituminous, prepared sizes	6.00	5.06	5.51
Bituminous— Prepared sizes— High volatile	10.26	9.92	9.91	St. Paul, Minn.: Pennsylvania anthracite— Stove	17.75	17.45	17.65
Low volatile	13.14	12.34	12.34	Chestnut	17.30	17.45	17.65
Mobile, Ala.: Bituminous, prepared sizes	8.90	8.19	8.25	Bituminous— Prepared sizes— High volatile	10.08	9.62	9.60
Newark, N. J.: Pennsylvania anthracite— Stove	13.63	13.06	13.30	Low volatile	13.15	12.51	12.51
Chestnut	13.13	13.06	13.32	Salt Lake City, Utah: Bituminous, prepared sizes	8.40	7.58	7.63
New Haven, Conn.: Pennsylvania anthracite— Stove	14.65	14.15	14.55	San Francisco, Calif.: New Mexico anthracite— Cerrillos egg	25.00	25.00	25.00
Chestnut	14.65	14.15	14.55	Colorado anthracite— Egg	24.50	24.50	24.50
New Orleans, La.: Bituminous, prepared sizes	9.11	8.07	8.07	Bituminous, prepared sizes	15.75	16.00	16.00
New York, N. Y.: Pennsylvania anthracite— Stove	13.58	13.17	13.46	Savannah, Ga.: Bituminous, prepared sizes	2 9.62	2 9.62	2 9.62
Chestnut	13.08	13.17	13.46	Scranton, Pa.: Pennsylvania anthracite— Stove	9.87	9.70	9.80
Norfolk, Va.: Pennsylvania anthracite— Stove	14.00	13.50	14.00	Chestnut	9.50	9.68	9.78
Chestnut	14.00	13.50	14.25	Seattle, Wash.: Bituminous, prepared sizes	10.68	9.59	9.80
Bituminous— Prepared sizes— High volatile	7.38	6.50	6.50	Springfield, Ill.: Bituminous, prepared sizes	4.37	4.34	4.34
Low volatile	8.50	7.75	8.50	Washington, D. C.: Pennsylvania anthracite— Stove	3 15.23	13.12	3 14.91
Run of mine	7.00	6.50	6.50	Chestnut	3 14.73	13.12	3 14.91
Omaha, Nebr.: Bituminous, prepared sizes	9.62	9.11	9.04	Bituminous— Prepared sizes— High volatile	3 8.38	7.36	3 8.36
Peoria, Ill.: Bituminous, prepared sizes	6.27	6.13	6.13	Low volatile	3 10.93	9.25	3 10.77
Philadelphia, Pa.: Pennsylvania anthracite— Stove	13.25	12.25	12.75	Run of mine	3 7.81	7.10	3 7.77
Chestnut	12.75	12.25	12.67	Mixed			

¹ The average price of coal delivered in bins is 50 cents higher than here shown. Practically all coal is delivered in bin.

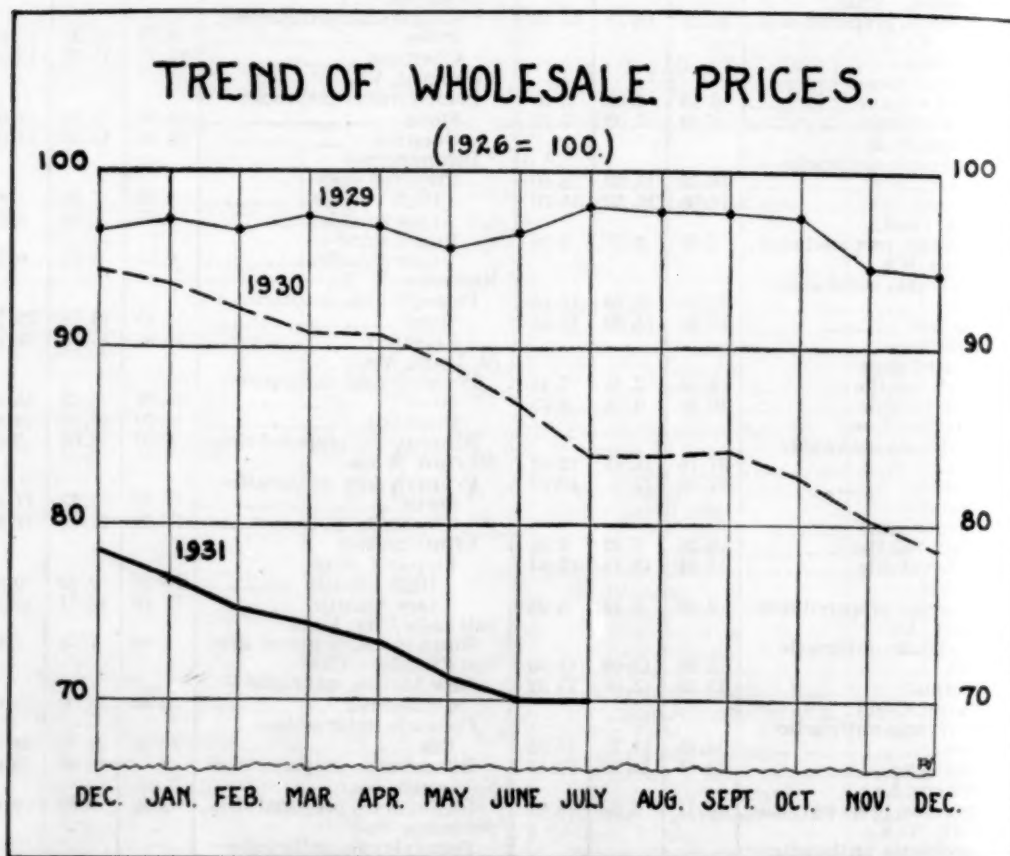
² All coal sold in Savannah is weighed by the city. A charge of 10 cents per ton or half ton is made. This additional charge has been included in the above price.

³ Per ton of 2,240 pounds.

Index Numbers of Wholesale Prices in July, 1931

THE recent downward movement of wholesale prices halted in July, as shown by the index number as computed by the Bureau of Labor Statistics of the United States Department of Labor. This index number, which includes 550 commodities or price series weighted according to the importance of each article and based on the average prices for 1926 as 100.0, was 70.0 for July, there being no change from the June figure. When compared with July, 1930, with an index of 84.0, a decrease of 16½ per cent has been recorded.

Farm products as a group averaged three-fourths of 1 per cent below June prices. Increases for corn, rye, light hogs, sheep and



lambs, live poultry, cotton, eggs, oranges, and onions were more than offset by decreases for barley, oats, wheat, beef cattle, lemons, clover and timothy hay, hops, and white potatoes.

Price increases among foods were reported for butter, cheese, dressed lamb, mutton, veal, dressed poultry, corn meal, raw and granulated sugar, and vegetable oils, resulting in a net increase of practically 1 per cent for the group as a whole. Food articles averaging lower than in June were cured beef, bacon, coffee, smoked and canned salmon, rye and wheat flour, oleomargarine, and rice.

Hides and skins and leather moved upward during the month, while boots and shoes eased off slightly. No change was reported for other leather products. The group as a whole advanced 1½ per cent.

In the group of textile products cotton goods, woolen and worsted goods, and other textiles showed further minor decreases, while silk and rayon moved upward, causing no change in the group within the month.

Only slight price fluctuations took place in the fuel and lighting group, resulting in a small fractional increase from June to July.

Among metals there were negligible increases in iron and steel, non-ferrous metals, and automobiles, while small decreases were shown for agricultural implements and other metal products. The group as a whole showed a slight advance.

Lumber, brick, cement, paint materials, and other building materials continued to move downward in July. No change was reported for structural steel. A decrease of more than 2 per cent is shown for the group as a whole.

Further price recessions during July for chemicals, drugs and pharmaceuticals, mixed fertilizers, and fertilizer materials caused the chemicals and drugs group to decline nearly 1 per cent. Both furniture and furnishings in the group of house-furnishing goods continued to move downward in the month.

A marked decrease took place in the prices of cattle feed, while paper and pulp, rubber, and other miscellaneous articles declined slightly. No change was reported for automobile tires.

Raw materials as a whole averaged lower than in June, while semi-manufactured articles averaged higher, with no change being recorded for finished products.

In the large group of nonagricultural commodities, including all articles other than farm products, and among all commodities other than farm products and foods, the July prices showed practically no change from those for the month before.

Between June and July increases took place in 133 instances, decreases in 155 instances, while in 262 instances no change occurred.

INDEX NUMBERS OF WHOLESALE PRICES BY GROUPS AND SUBGROUPS OF COMMODITIES

[1926=100.0]

Groups and subgroups	July, 1930	June, 1931	July, 1931	Purchasing power of the dollar, July, 1931
All commodities.....	84.0	70.0	70.0	\$1.429
Farm products.....	83.1	65.4	64.9	1.541
Grains.....	74.1	56.0	49.0	2.041
Livestock and poultry.....	81.8	61.9	63.0	1.587
Other farm products.....	86.9	70.8	71.3	1.403
Foods.....	86.3	72.4	73.1	1.368
Butter, cheese, and milk.....	92.0	79.1	80.9	1.236
Meats.....	91.8	71.3	73.4	1.362
Other foods.....	80.7	70.1	69.7	1.435
Hides and leather products.....	100.7	87.8	89.2	1.121
Hides and skins.....	94.0	65.5	72.7	1.376
Leather.....	100.1	87.8	89.8	1.114
Boots and shoes.....	102.9	94.7	93.5	1.070
Other leather products.....	105.2	101.3	101.3	.987
Textile products.....	80.0	65.4	65.4	1.529
Cotton goods.....	87.4	72.6	72.4	1.381
Silk and rayon.....	60.4	43.8	45.0	2.222
Woolen and worsted goods.....	88.0	75.9	75.3	1.328
Other textile products.....	65.5	53.1	52.1	1.919
Fuel and lighting materials.....	75.4	58.1	58.2	1.718
Anthracite coal.....	86.5	88.8	90.8	1.101
Bituminous coal.....	88.8	83.2	83.5	1.198
Coke.....	84.0	81.5	81.5	1.227
Gas.....	99.4	101.9	(1)	-----
Petroleum products.....	61.0	30.7	30.3	3.300

¹ Data not yet available.

**INDEX NUMBERS OF WHOLESALE PRICES BY GROUPS AND SUBGROUPS OF
COMMODITIES—Continued**

Groups and subgroups	July, 1930	June, 1931	July, 1931	Purchasing power of the dollar, July, 1931
Metals and metal products.....	94.3	87.4	87.5	\$1.143
Iron and steel.....	90.7	86.9	87.1	1.148
Nonferrous metals.....	73.5	58.9	59.4	1.684
Agricultural implements.....	94.9	94.6	94.5	1.058
Automobiles.....	105.5	98.6	98.9	1.011
Other metal products.....	98.4	94.4	92.5	1.081
Building materials.....	88.9	77.5	75.8	1.319
Lumber.....	83.3	67.8	66.3	1.508
Brick.....	82.9	80.8	80.5	1.242
Cement.....	91.7	77.7	75.8	1.319
Structural steel.....	84.3	84.3	84.3	1.186
Paint materials.....	87.1	70.1	69.5	1.439
Other building materials.....	99.4	91.7	88.7	1.127
Chemicals and drugs.....	87.8	77.9	77.3	1.294
Chemicals.....	92.5	80.2	80.1	1.248
Drugs and pharmaceuticals.....	67.3	62.1	61.6	1.623
Fertilizer materials.....	84.3	79.8	78.7	1.271
Mixed fertilizers.....	93.1	82.4	80.2	1.247
House-furnishing goods.....	96.2	88.6	88.0	1.136
Furniture.....	96.5	92.8	92.4	1.082
Furnishings.....	95.8	85.0	84.3	1.186
Miscellaneous.....	71.7	61.8	61.0	1.639
Cattle feed.....	94.8	61.1	55.8	1.792
Paper and pulp.....	83.8	80.3	80.1	1.248
Rubber.....	23.6	13.3	13.2	7.576
Automobile tires.....	52.0	45.7	45.7	2.188
Other miscellaneous.....	97.2	84.0	82.6	1.211
Raw materials.....	81.1	64.7	64.3	1.555
Semimanufactured articles.....	79.7	68.5	69.5	1.439
Finished products.....	86.7	74.0	74.0	1.351
Nonagricultural commodities.....	84.4	71.4	71.5	1.399
All commodities less farm products and foods.....	84.3	71.9	71.8	1.393

**Wholesale Prices in the United States and in Foreign Countries,
1923 to June, 1931**

IN THE following table the more important index numbers of wholesale prices in foreign countries and those of the United States Bureau of Labor Statistics have been brought together in order that the trend of prices in the several countries may be compared. The base periods here shown are those appearing in the sources from which the information has been drawn, in most cases being the year 1913 or some other pre-war period. Only general comparisons can be made from these figures, since, in addition to differences in the base periods, there are important differences in the composition of the index numbers themselves.

INDEX NUMBERS OF WHOLESALE PRICES IN THE UNITED STATES AND IN CERTAIN FOREIGN COUNTRIES

Country----	United States	Canada	Austria	Belgium	Czechoslovakia	Denmark	Finland	France	Germany	Italy
Computing agency----	Bureau of Labor Statistics	Dominion Bureau of Statistics	Federal Statistical Bureau	Ministry of Industry and Labor	Central Bureau of Statistics	Statistical Department	Central Bureau of Statistics	General Statistical Bureau	Federal Statistical Bureau	Riccardo Bachi
Base period.	1926	1926	January-June, 1914	April, 1914	July, 1914	1913	1926	1913	1913	1913
Commodities----	550	502	47	132	69	118	139	45	400	138
Year and month										
1923.....	100.6	98.0	124	497	977	-----	-----	419	-----	¹ 503.9
1924.....	98.1	99.4	136	573	997	-----	-----	488	137.3	¹ 497.4
1925.....	103.5	102.6	136	558	1008	210	-----	551	141.8	¹ 612.0
1926.....	100.0	100.0	123	744	955	163	100	703	134.4	¹ 618.2
1927.....	95.4	97.7	133	847	979	153	101	617	137.6	¹ 466.7
1928.....	97.7	96.4	130	843	979	153	102	620	140.0	¹ 453.1
1929.....	96.5	95.6	130	851	924	150	98	611	137.2	¹ 439.7
1930.....	86.3	87.0	117	744	² 118.5	130	90	532	116.3	383.0
1923										
January.....	102.0	-----	-----	434	991	-----	-----	387	-----	516.1
April.....	103.9	-----	-----	480	1012	-----	-----	415	-----	525.7
July.....	98.4	-----	-----	504	949	-----	-----	407	-----	503.9
October.....	99.4	-----	-----	515	960	-----	-----	421	-----	499.6
1924										
January.....	99.6	-----	-----	580	974	-----	-----	494	-----	504.4
April.....	97.3	-----	-----	555	1008	-----	-----	450	-----	510.3
July.....	95.6	-----	-----	566	953	-----	-----	481	-----	497.4
October.....	98.2	-----	-----	555	999	-----	-----	497	-----	522.0
1925										
January.....	102.9	-----	-----	559	1045	243	-----	514	-----	568.2
April.....	101.9	-----	-----	538	1020	230	-----	513	-----	570.1
July.....	104.3	-----	-----	559	1009	212	-----	557	-----	612.0
October.....	103.6	-----	-----	575	989	179	-----	572	-----	617.1
1926										
January.....	103.6	103.0	122	560	966	172	-----	634	135.8	608.0
April.....	100.1	101.2	119	621	923	157	-----	650	132.7	590.0
July.....	99.5	100.2	126	876	948	158	-----	836	133.1	618.2
October.....	99.4	98.1	125	856	972	178	-----	751	136.2	596.7
1927										
January.....	96.6	97.8	130	856	979	157	100	622	135.9	558.2
April.....	93.7	97.5	135	846	979	152	100	636	134.8	521.3
July.....	94.1	98.6	140	845	992	152	101	621	137.6	466.7
October.....	97.0	97.2	129	839	966	154	101	587	139.8	467.5
1928										
January.....	96.3	96.9	129	851	982	153	102	607	138.7	463.5
April.....	97.4	98.3	131	847	984	154	103	624	139.5	464.4
July.....	98.3	96.2	133	841	979	155	103	624	141.6	453.1
October.....	97.8	95.4	129	835	971	150	101	617	140.1	463.3
1929										
January.....	97.2	93.7	128	867	953	151	100	630	138.9	461.2
April.....	96.8	94.1	134	862	963	150	99	627	137.1	455.0
July.....	98.0	96.0	132	858	922	149	97	613	137.8	439.7
October.....	96.3	96.7	127	838	895	149	96	590	137.2	435.8
1930										
January.....	93.4	95.6	125	808	² 126.1	143	94	564	132.3	417.4
April.....	90.7	91.7	119	777	² 121.0	135	92	548	126.7	396.1
July.....	84.0	85.8	119	739	² 119.7	129	90	538	125.1	374.9
October.....	82.6	81.4	112	705	² 113.3	123	86	508	120.2	364.4
1931										
January.....	77.0	76.7	105	661	² 108.9	118	86	484	115.2	341.7
February.....	75.5	76.0	107	658	² 108.8	117	86	482	114.0	338.1
March.....	74.5	75.1	107	660	² 110.5	116	86	482	113.9	339.0
April.....	73.3	74.5	108	652	² 110.3	115	85	484	113.7	337.0
May.....	71.3	73.0	107	640	² 108.7	113	84	470	113.3	332.0
June.....	70.0	-----	110	642	-----	110	-----	468	112.3	327.0

¹ July.² In gold.

INDEX NUMBERS OF WHOLESALE PRICES IN THE UNITED STATES AND IN CERTAIN FOREIGN COUNTRIES—Continued

Country	Netherlands	Norway	Spain	Sweden	Switzerland	United Kingdom	Australia	New Zealand	South Africa	Japan	China	India
Computing agency	Central Bureau of Statistics	Central Bureau of Statistics	Institute of Geography and Statistics	Chamber of Commerce	Federal Labor Department	Board of Trade	Bureau of Census and Statistics	Census and Statistics Office	Office of Census and Statistics	Bank of Japan, Tokyo	National Tariff Commission, Shanghai	Labor Office, Bombay
Base period	1913	1913	1913	1913	July, 1914	1913	July, 1914	1913	1913	1913	1913	July, 1914
Commodities	48	95	74	160	118	150	92	180	188	56	³ 117	44
Year and month												
1923	151	232	172	163	181	158.9	170	158	127	199	156.4	181
1924	156	268	183	162	175	166.2	165	165	129	206	153.9	182
1925	155	253	188	161	162	159.1	162	161	128	202	159.4	183
1926	145	198	181	149	145	148.1	161	154	123	179	164.1	149
1927	148	167	172	146	142	141.4	159	146	124	170	170.4	147
1928	149	161	168	148	145	140.3	157	147	121	171	160.7	146
1929	142	153	171	140	141	136.5	158	147	116	166	163.7	145
1930	117	143	172	122	126	119.5	140	143	103	137	179.7	126
1923												
January	157	223	170	163	-----	157.0	163	-----	131	184	152.7	187
April	156	229	174	168	-----	162.0	167	-----	126	196	157.7	180
July	145	231	170	162	-----	156.5	180	-----	124	192	155.4	178
October	148	235	171	161	-----	158.1	171	-----	125	212	156.1	181
1924												
January	156	251	178	161	-----	165.4	174	-----	131	211	155.8	188
April	154	263	184	161	-----	164.7	166	-----	126	207	153.7	184
July	151	265	182	157	-----	162.6	163	-----	125	195	151.5	184
October	161	273	186	167	-----	170.0	163	-----	133	213	152.8	181
1925												
January	160	279	191	169	-----	171.1	163	166	130	214	159.9	173
April	151	273	190	163	-----	161.9	158	162	130	202	159.3	165
July	155	254	188	161	-----	156.9	162	161	127	198	162.8	158
October	154	223	187	154	-----	153.9	163	162	124	200	159.0	158
1926												
January	153	214	186	153	153	151.3	161	159	124	192	164.0	154
April	143	199	179	150	145	143.6	168	156	120	181	162.8	151
July	141	192	178	148	145	148.7	162	156	122	179	156.9	149
October	143	198	179	148	144	152.1	154	153	127	174	171.1	147
1927												
January	145	174	184	146	141	143.6	154	151	128	170	172.8	146
April	143	164	177	143	140	139.8	151	147	126	170	173.1	145
July	151	165	168	146	140	141.1	161	146	120	170	171.0	147
October	150	165	169	147	145	141.4	173	146	122	170	168.7	146
1928												
January	153	164	166	148	145	141.1	163	150	123	169	163.1	141
April	153	162	166	151	146	142.9	162	147	121	170	163.1	142
July	148	162	164	150	144	141.1	157	148	119	169	159.2	147
October	146	157	174	145	145	137.9	152	149	120	174	158.8	150
1929												
January	146	154	171	144	143	138.3	157	147	120	172	160.1	148
April	144	154	174	141	140	138.8	158	146	117	170	161.2	144
July	141	152	169	140	143	137.4	159	147	115	166	162.7	145
October	140	154	172	138	142	136.1	161	148	113	163	168.0	146
1930												
January	131	150	172	131	136	131.0	151	147	107	152	169.6	139
April	122	145	172	124	129	123.7	146	146	104	147	174.2	134
July	115	142	170	121	126	119.2	144	144	100	134	190.1	124
October	111	140	175	118	122	113.0	130	142	99	124	182.3	117
1931												
January	105	135	173	115	115	106.9	124	140	102	120	-----	111
February	104	133	175	114	115	106.2	122	137	-----	119	-----	112
March	103	131	174	113	114	105.9	123	136	-----	120	-----	111
April	102	130	172	112	112	105.7	117	134	99.1	119	-----	110
May	102	128	-----	111	111	104.4	-----	-----	-----	116	-----	-----
June	-----	127	-----	-----	-----	103.2	-----	-----	-----	-----	-----	-----

³ 147 items.

IMMIGRATION AND EMIGRATION

Statistics of Immigration, Year Ending June 30, 1931

By J. J. KUNNA, CHIEF STATISTICIAN, UNITED STATES BUREAU OF IMMIGRATION

THE statistics for June, 1931, show 3,534 immigrant and 12,809 nonimmigrant aliens admitted to the United States, a total of 16,343. Alien departures this month numbered 22,705, including 5,893 emigrants and 16,812 nonemigrants. During the same month 25,588 American citizens—13,791 males and 11,797 females—returned to the United States, and 29,579—14,831 males and 14,748 females—departed for foreign countries.

For the first time in over half a century (since 1862) the annual immigration to the United States dropped below 100,000. During the fiscal year just ended, 97,139 immigrant aliens were admitted, as compared with 241,700 in the preceding year, a decrease of 144,561, or 59.8 per cent. In 1914, just before the World War and the last year with a total immigration of over a million, the influx during seven different months exceeded the number for the entire fiscal year 1931. In the single month of April, 1914, the new arrivals from Hungary, Italy, and the Russian Empire (67,023) exceeded the number of immigrants admitted from all European countries (61,909) during the whole year 1930-31. For every 100 newcomers from Europe who came to the United States in 1914, only 5 are now admitted. About 200 unskilled wage earners entered this country during the period of unrestricted immigration for every 3 now admitted. Among the immigrant aliens entering in the year 1914, 514,460 gave their occupation as that of laborer, while during the year 1931 only 7,925 immigrant laborers were admitted and less than one-fifth of these came during the last six months.

During the fiscal year ending June 30, 1931, a total of 280,679 aliens entered the country, of whom about one-third, or 97,139, were classified as immigrants, coming initially for permanent residence, while 183,540 were nonimmigrants. Of the latter class, 91,701 were residents of the United States returning from a temporary sojourn in foreign countries, and 91,839 were visitors for a temporary stay here and persons passing through the country on their way elsewhere. In the same year, 290,916 aliens departed, including 61,882 emigrants and 229,034 nonemigrants, resulting in an excess of departures over admissions of 10,237. During the preceding year, the total admissions exceeded the departures by 173,789.

The peak month of the past year for arriving aliens was September, when 47,151 were admitted, and February, with 12,212, was the low month. August was the high period for aliens departed 34,411 leaving in that month, while March, during which 17,444 left, was the low month of the fiscal year.

Of the 97,139 immigrants admitted during the last fiscal year, 61,909 came from European countries, a drop of 59.8 per cent from the 147,438 immigrants from Europe during the previous year. The principal sources show a larger proportionate decrease. The number of immigrants admitted in 1930-31 from the various countries showed the following decreases as compared with the previous year: Great Britain, from 31,015 to 9,110, or 70.6 per cent; Germany, from 26,569 to 10,401, or 60.8 per cent; Irish Free State, from 17,971 to 6,121, or 65.9 per cent; Scandinavian countries from 6,919 to 3,133, or 54.7 per cent; and Italy from 22,327 to 13,399, or 40 per cent. Canadian and Mexican immigration declined nearly two-thirds and three-fourths, respectively, that from the former country dropping from 63,502 to 21,687, or 65.8 per cent, and from the latter from 12,703 to 3,333, or 73.8 per cent.

The principal nationalities contributing immigrant aliens during the fiscal year 1931 were as follows: Italian, 13,970; German, 13,813; English, 12,703; Irish, 10,814; Scotch, 7,618; Hebrew, 5,692; French, 4,908; and Scandinavian, 3,947. Of every 100 immigrants now entering the United States, about 14 are Italian and 14 German, while the English comprise about 13, Irish 11, Scotch 8, Hebrew 6, French 5, and Scandinavian 4. The other races or nationalities contribute about 25 of every 100 present-day immigrant aliens. Of every 100 immigrants admitted two years ago (in 1929), about 20 were German; 14 Mexican; 11, each, Irish and English; 8 Scotch, 7, each, Scandinavian and Italian; 6 French; and 4 Hebrew. The other nationalities formed about 12 of every 100 immigrants then admitted.

While the greatest number of newcomers enter the United States through the port of New York, a large percentage enter by way of the northern and southern land boundaries. The New York figures for the fiscal year just ended show 63,392 immigrant aliens landed at that port, with the other ports on all coasts minor in comparison. At Boston, for instance, 3,053 immigrants entered the country; at Providence, 928; at Key West, 556; at New Orleans, 549; at San Francisco, 2,156; at Seattle, 544; and at San Diego and other southern California ports, 783. Only 14 immigrants were admitted at ports in Alaska, 195 in Hawaii, and 146 in Porto Rico. Immigrants reaching the United States by way of the Canadian border numbered 21,251, principally through the Montreal and Detroit districts, while 3,075 came over the Mexican border, mainly through the San Antonio and El Paso (Tex.) districts.

Nearly two-thirds of the newcomers continue to settle in the North Atlantic States, 61,195 immigrants admitted during the past fiscal year giving that section of the country as their destination. New York received the largest number by far, 35,867, while 7,225 went to Massachusetts, 6,381 to New Jersey, and 6,359 to Pennsylvania. Michigan received 5,591 immigrants; Illinois, 5,850; Ohio, 2,889; and other North Central States, 4,555. California, which comes second only to New York in number of immigrants, received 7,788 newcomers. The Southern States will check up a gain of only 5,399 new residents from immigration during the fiscal year ended June 30, 1931.

Less than 14 per cent of the immigrants for the past fiscal year were past the prime of life, only 12,719 of the newcomers giving their age at the time of arrival as 45 years and over, while 17,320 were under 16 years of age, 21,156 ranged in age from 16 to 21 years, 25,956 from 22 to 29 years, 14,097 from 30 to 37 years, and 5,891 from 38 to 44 years. The single immigrants numbered 56,564, married 35,700, widowed 4,573, and divorced 302.

The immigrants admitted last year represented nearly all imaginable callings, but those listed as having no occupation, which includes mainly women and children, predominated, 53,012, over one-half of the total, being of this class. The professional group numbered 4,773, the skilled workers 13,549, and the servants 9,740, while 7,925 were laborers, and 2,743 were farmers.

Of the 280,679 aliens of all classes admitted last year, 54,118 came in under the immigration act of 1924 as immigrants charged to the quota, 21,139 as natives of nonquota countries, principally Canada, and 17,264 as husbands, wives, and unmarried children of American citizens, these three groups comprising the bulk of the newcomers for permanent residence in this country. Other principal groups included 91,442 returning residents, 55,636 temporary visitors for business or pleasure, 32,169 persons passing through the country, and 4,973 Government officials, their families, and employees.

A total of 439,897 American citizens returned to the United States during the fiscal year ended June 30, 1931, the males numbering 217,788 and the females 222,109. The outgoing citizens last year included 220,560 male and 225,826 female, a total of 446,386 going to foreign countries. The largest movements were during July, August, and September, 1930, 38,822, 69,957, and 80,900 returning during these respective months, the bulk of these passengers being tourists on pleasure bent to European countries.

There were 9,744 aliens debarred from entering the United States during the past fiscal year, the major portion of whom were turned back at points along the northern and southern land borders, 7,133 to Canada and 1,290 to Mexico. The remaining 1,321 were rejected at the seaports of entry. While 4.6 per cent of the applicants for admission at all ports were barred during the year, less than nine-tenths of 1 per cent, or about 88 out of every 10,000 of the alien arrivals at the seaports, were denied admission. The percentage was still smaller for New York, the bulk of the aliens arriving there having been preexamined abroad. At this port 189,070 aliens sought admission during the year and 698 were rejected, or a little less than four-tenths of 1 per cent of the applicants debarred.

A record number of deportations was recorded during the fiscal year 1931, a total of 18,142 persons having been deported from the United States under warrant proceedings. This is an increase of 1,511 over the previous year, and approximates the total deportees for the entire five years following the World War or from 1919 to 1923. Over one-third of the deportees during the past fiscal year entered the country without proper inspection (surreptitious entries), 6,849 having entered without proper immigration visas or inspection, 2,835 remained here longer than permitted, 2,701 were of the criminal and immoral classes, and 952 were mentally or physically defective. Of the remainder, 2,066 (over 16 years of age) were unable to read, 1,240 were likely to become a public charge, 1,003 had previously

been deported, and 496 were removed from the country for miscellaneous causes under the general immigration laws. These deportees were sent to nearly every section of the globe, 8,409 going to Mexico, 6,162 to European countries, 2,276 to Canada, 710 to Asia, and 585 to other countries. The majority of the deportees in 1931 entered the United States via the land borders, 8,789 coming in over the Mexican border, and 5,016 over the Canadian border, while 3,302 entered at Atlantic ports, mainly New York, 533 at Gulf of Mexico ports; 447 at Pacific ports, and 55 at ports in Alaska, Hawaii, and Porto Rico.

During the last fiscal year, 541 (402 male and 139 female) indigent aliens were at their own request returned to their native land, the major portion (522) being destined to European countries, principally Great Britain, Germany, Ireland, and Italy.

INWARD AND OUTWARD PASSENGER MOVEMENT FROM JULY 1, 1930, TO JUNE 30, 1931

Period	Inward					Aliens de- barred from enter- ing ¹	Outward					Aliens de- ported after enter- ing ²
	Aliens admitted			United States citizens arrived	Total		Aliens departed			United States citizens de- parted	Total	
	Immi- grant	Non- immi- grant	Total				Emi- grant	Non- emi- grant	Total			
1930												
July.....	13,323	16,466	29,789	38,822	68,611	881	4,818	22,588	27,406	55,366	82,772	1,440
August.....	14,816	19,724	34,540	69,957	104,497	837	5,245	29,166	34,411	88,372	122,783	1,208
September.....	17,792	29,359	47,151	80,900	128,051	929	5,100	24,604	29,704	56,526	86,230	1,532
October.....	13,942	23,304	37,246	40,702	77,948	854	5,352	22,938	28,290	32,988	61,278	1,526
November.....	9,209	13,032	22,241	22,381	44,622	734	4,951	19,285	24,236	24,420	48,656	1,406
December.....	6,439	9,939	16,378	28,535	44,913	806	5,450	17,603	23,053	21,140	44,193	1,377
1931												
January.....	4,091	8,724	12,815	19,844	32,659	693	4,397	17,169	21,566	24,885	46,451	1,517
February.....	3,147	9,065	12,212	27,508	39,720	689	4,720	16,170	20,890	33,172	54,062	1,210
March.....	3,577	12,767	16,344	34,861	51,205	597	4,693	12,751	17,444	32,278	49,722	1,726
April.....	3,470	14,289	17,759	28,281	46,040	809	5,647	14,346	19,993	24,418	44,411	1,897
May.....	3,799	14,062	17,861	22,518	40,379	1,001	5,616	15,602	21,218	23,242	44,460	1,797
June.....	3,534	12,809	16,343	25,588	41,931	914	5,893	16,812	22,705	29,579	52,284	1,517
Total...	97,139	183,540	280,679	439,897	720,576	9,744	61,882	229,034	290,916	446,386	737,302	18,142

¹ These aliens are not included among arrivals, as they were not permitted to enter the United States.

² These aliens are included among aliens departed, they having entered the United States, legally or illegally, and later being deported.

PUBLICATIONS RELATING TO LABOR

Official—United States

IDAHO.—Inspector of Mines. *Thirty-second annual report of the mining industry of Idaho, for the year 1930.* [Boise, 1931?]. 308 pp.

Presents detailed information concerning mineral resources, data on annual metal output in the State from 1903 to 1930, accident and wage data, and a directory of mining companies.

ILLINOIS.—Department of Mines and Minerals. *A compilation of the reports of the mining industry of Illinois from the earliest records to the close of the year 1930.* Springfield, 1931. 177 pp.

INDIANA.—Industrial Board. *Annual report for the fiscal year ending September 30, 1930.* Fort Wayne, [1931?]. 68 pp.

Reviewed in this issue.

—Legislative Bureau. *Year book of the State of Indiana, for the year 1930.* Fort Wayne, 1930. 1318 pp.; maps.

Presents the essential parts of the annual reports of all of the State offices, boards, commissions, departments, bureaus, and institutions, except the educational, benevolent, and correctional institutions, whose reports are issued separately.

KENTUCKY.—Workmen's Compensation Board. *Annual report, July 1, 1929, to June 30, 1930.* Frankfort, [1930?]. 37 pp.

Reviewed in this issue.

MASSACHUSETTS.—Emergency Committee on Unemployment. *The final report from October 29, 1930, to April 15, 1931.* Boston, 1931. 104 pp.; maps.

This report shows the method of organization, activities, and expenditures of the committee.

NEW YORK.—Board of Housing. *Report.* Albany, 1931. 72 pp.; plans, illus. (Legislative document, 1931, No. 84.)

In addition to a review of the model housing enterprises under construction in 1930, and of those completed in that year or earlier, the report contains a study of the standard of living of 400 families in the housing project of the Amalgamated Housing Corporation, a tabular presentation of the maintenance costs of low-cost housing projects, and a study of the relation of rents to land prices, land coverage, construction costs, and room sizes.

OKLAHOMA.—Industrial Commission. *Summary report, from January 1, 1930, to January 1, 1931.* [Oklahoma City], 1931. 15 pp.

Reviewed in this issue.

RHODE ISLAND.—Department of Labor. *Report for the year 1930.* Providence, 1931. 47 pp.

Statistics of operation of the State workmen's compensation act, taken from this report, are given in this issue.

WISCONSIN.—Industrial Commission. *Workmen's compensation: Fifteenth report, July 1, 1928, to June 30, 1930.* [Madison, 1931?]. 29 pp.

Data from this report are given in this issue of the Review.

UNITED STATES.—Congress. House of Representatives. Report No. 2590 (71st Cong., 3d sess.): *Prohibition of importation of goods produced by convict, forced, or and indentured labor.* (Report by Mr. Hawley, Committee on Ways and Means, to accompany H. R. 16517.) Washington, 1931. 2 pp.

— — — Senate. Committee on Finance. *Prohibition of importation of goods produced by convict, forced or and indentured labor.* Hearing (71st Cong., 3d sess.) on H. R. 16517, February 24, 1931. Washington, 1931. 26 pp.

— Department of Agriculture. *Miscellaneous Publication No. 116: Rural standards of living—a selected bibliography, compiled by Louise O. Bercau.* Washington, 1931. 84 pp.

— Department of Commerce. Bureau of Mines. *Bulletin 338: Quarry accidents in the United States during the calendar year 1929, by William W. Adams.* Washington, 1931. 102 pp.

Reviewed in this issue.

— Department of Labor. Bureau of Labor Statistics. *Bulletin No. 544: Unemployment-benefit plans in the United States and unemployment insurance in foreign countries.* Washington, 1931. 385 pp.

Reviewed in this issue.

— — — Women's Bureau. *Bulletin No. 87: Sanitary drinking facilities with special reference to drinking fountains, by Marie Correll.* Washington, 1931. 26 pp.

This bulletin summarizes investigations of different types of drinking facilities, particularly the different types of drinking fountains, standards which have been developed, and legislation relating to the question in the different States.

— — — Women's place in industry in 10 Southern States, by Mary Anderson. Washington, 1931. 12 pp.

— Federal Board for Vocational Education. *Bulletin No. 39, Trade and Industrial Series No. 9: Coal-mine gases—technical information for use in vocational training classes.* Washington, 1931. 39 pp.; illus.

This is a revision of a bulletin first published in 1919. The bulletin is planned as a guide for use in trade-extension courses for coal miners and presents in non-technical language the principal facts regarding mine gases.

— — — *Bulletin No. 42, Trade and Industrial Series No. 12: Flame safety lamps, devices for detecting fire damp, and miners' electric lamps.* Washington, 1931. 65 pp. (Revised edition.)

This bulletin is planned for use in evening trade-extension courses for miners. It was prepared with the assistance of engineers of the United States Bureau of Mines.

— Federal Farm Board. *Circular No. 4: Financial structure of cooperatives, by Stanley Reed.* Washington, 1931. 16 pp.

Official—Foreign Countries

AUSTRALIA.—Bureau of Census and Statistics. Tasmania branch. *Statistics of the State of Tasmania for the year 1929–30.* Hobart, [1931?]. [Various paging.]

Includes sections on production and wages in manufacturing, education, hospitals, etc., and friendly societies.

BELGIUM.—Ministère de l'Intérieur et de l'Hygiène. *Annuaire statistique de la Belgique et du Congo Belge, 1929–30.* Brussels, 1930. [Various paging.]

The Belgian statistical yearbook for 1929–30 includes statistics relating to education, savings, cooperation, cheap dwellings, strikes and lockouts, and industrial accidents.

BUDAPEST (HUNGARY).—Kommunal Statistisches Amt. *Statistisch-Administratives Jahrbuch, 1930. Budapest, 1930. 475*, 1009 pp.*

Contains statistical information for the city of Budapest on housing, public health, cost of living, working conditions of salaried employees in commercial undertakings, unemployment, labor organizations, social insurance, wages, welfare work, etc. The text of the volume is in Hungarian but the statistical section has table of contents, table heads, and index in German.

BULGARIA.—Direction Générale de la Statistique. *Annuaire statistique du Royaume de Bulgarie, 1929-1930 années. Sofia, 1930. 513 pp.*

Contains statistical data, for the years 1929 and 1930, on industries and occupations, workers engaged, wages, industrial disputes, industrial accidents, cooperation, social insurance, etc., in Bulgaria.

GERMANY.—Ausschuss zur Untersuchung der Erzeugungs- und Absatzbedingungen der deutschen Wirtschaft. III. Unterausschuss. *Das deutsche Handwerk. Berlin, 1930. 4 vols.*

A report on production and conditions in the German handicraft industries, by a subcommittee of the Committee on Investigation of Production and Conditions of German Industries. The first volume describes handicrafts in general and gives a historical background; the second volume contains statistics on handicrafts; the third volume reviews in detail handicrafts in baking, confectionery, butcher, shoemaking, tailoring, and bookbinding trades; the fourth volume covers saddlery, blacksmithing, carpentry, cabinetmaking, and electrical trades.

—Statistisches Reichsamt. *Sonderhefte zu Wirtschaft und Statistik, Nr. 8: Industrielle Produktion bis zum Jahre 1930. Berlin, 1931. 207 pp.; charts.*

Contains statistical information in regard to industrial production in Germany up to the year 1930, giving the volume and value of various products.

GREAT BRITAIN.—Industrial Health Research Board. *Eleventh annual report, to June 30, 1931, London, 1931. 85 pp.; diagrams.*

The report covers the specific studies carried out by the board during the year ending June 30, 1931, and includes also an analysis of the results of special investigations made during the 5-year period, 1925-1930. A classified list of the publications of the board is appended.

—Ministry of Labor. *Memorandum on the shortage, surplus and redistribution of juvenile labor in England and Wales during the years 1930-1938. London, 1931. 18 pp.*

Reviewed in this issue.

—Oversea Settlement Committee. *Report for the period January 1, 1930, to March 31, 1931. London, 1931. 42 pp. (Cmd. 3887.)*

The past year, the committee reports, has been the most unfavorable for migration since the war. Not only the Dominions, but practically all countries, have taken measures to restrict immigration, and until industrial and economic conditions improve, emigration is not likely to increase. Under the circumstances, the committee intends to keep in touch with the situation, preserve as far as possible the good will which its work hitherto has secured, and be ready to undertake effective action as soon as conditions warrant a resumption of the migration movement.

—Royal Commission on Labor in India. *Report. London, 1931. 580 pp.; maps. (Cmd. 3883.)*

Data relating to the trade-union movement in India, taken from this report, are given in this issue.

—Treasury. Committee on Finance and Industry. *Report. London, 1931. 322 pp. (Cmd. 3897.)*

A discussion of the British attitude toward wage reductions as a remedy for depression, taken from this report, is given in this issue of the Review.

GREATER SHANGHAI (CHINA).—Bureau of Social Affairs. *Wages and hours of labor, Greater Shanghai, 1929. Shanghai, [1930?]. English section, xv, 153 pp. (In Chinese and English.)*

Statistics from this report are given in this issue.

INDIA.—Department of Commercial Intelligence and Statistics. *Statistical abstract for British India, with statistics relating to certain Indian States, from 1919-20 to 1928-29. London, 1931. 778 pp. (Cmd. 3882.)*

INTERNATIONAL LABOR OFFICE.—*Annual review, 1930. Geneva, 1931. 505 pp.*

Beginning with his report to the fifteenth session of the International Labor Conference, the director of the International Labor Office decided to divide his annual report into two separate documents, the major portion to be published in the form of a labor yearbook. The present volume is the first number of this yearbook; it consists of two sections, covering, respectively, the general activity of the International Labor Organization and the social movement, the material on the social movement including information on the following subjects: The economic situation; conditions of work; social insurance; wages; unemployment, placing, migration; workers' living conditions; and workers' general rights.

— *The regulation of hours of work on board ship. (First item on agenda of International Labor Conference, second discussion, Report I.) Geneva, 1931. 231 pp.*

— *Studies and Reports, Series C (employment and unemployment), No. 16: Unemployment problems in 1931. Geneva, 1931. 280 pp.; charts.*

The volume contains that part of the report of the director of the International Labor Office to the fifteenth session of the International Labor Conference concerning unemployment, together with a series of memoranda submitted in January, 1931, to the unemployment committee of the governing body of the International Labor Office. The material is presented under the following general heads: Unemployment problems in 1931 (extract from the director's report); unemployment and monetary fluctuations; inequalities in the international distribution of capital as a cause of unemployment; disturbances in international trade and their effects on unemployment; population and unemployment; the effects of rationalization on employment; and wages and employment.

— *Studies and Reports, Series C (employment and unemployment), No. 17: Unemployment problems in the United States, by H. B. Butler. Geneva, 1931. 112 pp.*

This report, by the deputy director of the International Labor Office, opens with a discussion of the extent of unemployment in the United States, which is followed by chapters on the decline of consumption, machinery and employment, some aspects of technological unemployment, remedial measures, and regularization of employment.

— *Studies and Reports, Series D (wages and hours of work), No. 20: Principles and methods of wage determination in the coal-mining industry; an international survey. Geneva, 1931. 104 pp.*

Reviewed in this issue.

LEAGUE OF NATIONS.—Child Welfare Committee. *Auxiliary services of juvenile courts. Geneva, 1931. 128 pp.*

In August, 1929, the secretary general of the child welfare committee sent a questionnaire to all governments, requesting information as to the auxiliary services maintained in connection with juvenile courts. Fifty-four replies were received, of which 23 contained information on some or all of the points covered by the questionnaire. This report gives a summary of these replies, with a tabular presentation of the countries having such services, what they are and when established. The manner in which the services are used is discussed by countries.

LEAGUE OF NATIONS.—Economic and Financial Section. *Review of the legal aspects of industrial agreements*, by Henri Decugis (France), Robert E. Olds (United States), and Siegfried Tschierschky (Germany). Geneva, 1930. 95 pp.

LODZ (POLAND).—Service de Statistique. *Annuaire statistique de la ville de Lodz, année 1929*. Lodz, 1931. 229 pp. (In French and Polish.)

Contains statistics on public health, charity, cost of living, unemployment, employment service, etc., in the city of Lodz in 1929.

MANITOBA (CANADA).—Workmen's Compensation Board. *Report for 1930*. Winnipeg, 1931. 32 pp.

Reviewed in this issue.

NEW ZEALAND.—Census and Statistics Office. *Statistical report for the year 1929*. Wellington, 1931. xlii, 199 pp.

Deals with prices, wages and hours of labor, employment and unemployment, industrial accidents, building societies, bankruptcy, incomes and income tax, and land and land tax. Includes a statistical summary for the Dominion from 1880 to 1929.

NORWAY.—Rikstrygdeverket. *Industriarbeidertrygden ulykkestrygden for industriarbeidere M. V., 1928*. Oslo, 1931. 111 pp. (Norges Officielle Statistikk VIII, 154.)

Annual report on insurance against industrial accidents in Norway during the year 1928.

NOVA SCOTIA (CANADA).—Workmen's Compensation Board. *Report for 1930*. Halifax, 1931. 32 pp.

Reviewed in this issue.

POLAND.—Ministère du Travail et de L'Assistance Sociale. *L'inspection du travail en 1929*. Warsaw, 1930. lxxviii, 223 pp. (In Polish.)

A report on factory inspection in Poland in 1929, including labor laws, wages, industrial disputes, labor unions, mediation and conciliation, and a special account of labor conditions in agriculture.

SAXONY (GERMANY).—Statistisches Landesamt. *Statistisches Jahrbuch für den Freistaat Sachsen, 1930*. Dresden, 1931. 360 pp.

Contains statistical information on vocational guidance, employment service, unemployment, social insurance, wages, hours, industrial disputes, etc., in the State of Saxony in 1930.

SWEDEN.—[Social Departementet.] Socialstyrelsen. *Yrkesinspektionens verksamhet år 1929*. Stockholm, 1931. 126 pp.; diagrams, illus.

Annual report, for 1929, on factory inspection in Sweden, including information on organization and personnel, industrial accidents and diseases and measures for their prevention, etc.

Unofficial

AMERICAN ASSOCIATION FOR OLD AGE SECURITY. *Old age security progress, 1931*. *Report of proceedings of the Fourth National Conference on Old Age Security, held in New York, April 10, 1931*. New York, 22 East Seventeenth Street, 1931. 91 pp.

AMERICAN COUNTRY LIFE ASSOCIATION. *Standards of living*. *Proceedings of the Thirtieth American Country Life Conference, Madison, Wis., October 7-10, 1930*. New York, 105 East Twenty-second Street, 1931. 165 pp.

The general subjects covered at the conference included the relation of the ability to pay to standards of living; electrification and transportation; making the most of home resources; the artistic in country life; community opportunities and policies; public relief and rural families; and basic elements of rural culture.

AMERICAN IRON AND STEEL INSTITUTE. *Annual statistical report, for 1930.* New York, 75 West Street, 1931. 120 pp.

Gives data on production, imports and exports, and prices in the iron and steel and allied industries of the United States and Canada for 1930 and preceding years, with some statistics for foreign countries.

AMERICAN SOCIETY OF MECHANICAL ENGINEERS. *Bibliography of management literature, including an author index, up to January, 1931, compiled by R. M. Berg.* New York, 29 West Thirty-ninth Street, 1931. 142 pp.

AMERICAN STANDARDS ASSOCIATION. *American standards yearbook, 1931.* New York, 29 West Thirty-ninth Street, 1931. 102 pp.

Reviews the accomplishments of the association during 1930 and the cooperative activities of trade associations, technical societies, and Government departments, and describes the development of national and international standardization. It also contains a list of the standards approved so far, including the 46 approved in 1930, and the projects under consideration, giving the membership of sectional committees where the personnel has been approved. Up to January 1, 1931, the American Standards Association had approved 181 "American standards" and had before it 179 incompleting projects.

BÖLGER, B. *Organisatorische verhoudingen tusschen werkgevers en arbeiders.* Haarlem, H. D. Tjeenk Willink & Zoon, 1929. 468 pp. (In Dutch.)

A historical review and analysis of the organized movements of employers and workers (by industries and occupations) in the Netherlands, of the methods used and the results obtained as to the improvement of labor condition, including legislation, public labor offices, wages, health, etc.

BUILDING TRADES EMPLOYERS' ASSOCIATION OF THE CITY OF NEW YORK. Committee on Accident Prevention. *Bulletin No. 11: Facts on industrial accidents, 1931 edition.* New York, 2 Park Avenue, 1931. 12 pp.

Reviewed in this issue.

CHAMBERLAIN, WILLIAM HENRY. *The Soviet planned economic order.* Boston, World Peace Foundation, 1931. 243 pp.

Deals with economic planning in Soviet Russia, especially with the 5-year plan for industrial expansion, and the results obtained and expected in the future.

COLTON, ETHAN T. *The X Y Z of communism.* New York, Macmillan Co., 1931. 423 pp.; illus.

Contains a descriptive analysis of the communist theory and communist practices in Russia up to the present.

COMITÉ CENTRAL DES HOUILLÈRES DE FRANCE ET CHAMBRE SYNDICALE FRANÇAISE DES MINES MÉTALLIQUES. *Annuaire: Houillères—mines de fer—mines métalliques. Trente-deuxième année (1931).* Paris, 35 Rue Saint-Dominique, 1931. [Various paging.]

This annual report of the central committee of coal operators contains statistics of wages and production in coal and lignite mines in France in 1928 and mineral production in France and its colonies from 1926 to 1930.

DAVIES, MARGARET LLEWELYN, Editor. *Life as we have known it, by cooperative working women.* London, Hogarth Press, 1931. 141 pp.; illus.

Accounts of the lives and working and living conditions of a number of members of the Cooperative Women's Guild, written by themselves. This book furnishes interesting side lights on what the guild has meant in the lives of these working women, in the way of education and broadening of outlook, and also the reforms these women have worked to bring about, as a result of their mental awakening.

FELDMAN, HERMAN. *A personnel program for the Federal civil service.* Washington, 1931. 289 pp. (H. Doc. No. 773, 71st Cong., 3d sess.)

The author, who was economic adviser to the field survey division of the Personnel Classification Board during the study of the field service made in accordance with the Welch Act, assumes full responsibility for the views presented. His report contains a study of the existing situation, with a review of the Government's wage policy, and a discussion of important aspects of any far-reaching wage policy, such as the problem of geographic differentials, the principles on which salary levels may be determined, financial incentives, salary administration, and the like. A second part deals with the evolution of a personnel program, selection and placement in the Government service, the general subject of securing efficiency from Federal employees, the matter of grievances, group representation, and employee cooperation, and organizing for personnel administration.

FLORINSKY, MICHAEL T. *The end of the Russian Empire.* New Haven, Yale University Press, 1931. 272 pp. (Carnegie Endowment for International Peace, Division of Economics and History, Economic and Social History of the World War, Russian series.)

Describes and analyzes economic and political conditions in the former Russian Empire prior to and during the World War, including a chapter on labor conditions, such as wages, cost of living, industrial disputes, labor organizations, etc. The peasant land hunger and aspiration of subject races and nations for freedom as revolutionary issues are touched upon.

FOREMAN, CLARENCE J. *Efficiency and scarcity profits: An economic and legal analysis of the residual surplus.* Chicago, University of Chicago Press, 1930. 343 pp.

GERMAN COMMERCE YEARBOOK, 1930-1931. Edited by H. Kuhnert. Berlin, Struppe & Winckler, 1931. 264 pp.

Contains descriptive information on various phases of economic life in Germany for 1930 and the early part of 1931, contributed by a number of writers. Statistics on German-American export and import trade and German production for 1930 and earlier years are also given.

HANDBUCH DER ARBEITSWISSENSCHAFT. Band V. *Objektpsychotechnik. Handbuch sachpsychologischer Arbeitsgestaltung, von Fritz Giese.* Halle, Carl Marhold, 1930. 833 pp.; diagrams, illus.

A psychological study of workers, divided into three parts: I. Labor and occupational psychology; II. Psychotechnics of organization; and III. Psychotechnics of management. A decided distinction is made between individual and mass psychology.

HARPER, ELSIE D. *Out of a job; proposals for unemployment insurance.* New York, Woman's Press, 1931. 52 pp.

This pamphlet contains a review of several of the latest reports of unemployment benefit and insurance systems and discusses proposed unemployment insurance legislation in the United States.

HOFFMAN, FREDERICK L. *The occupational incidence of cancer. Contributed to the International Occupational Disease Conference, Geneva, Switzerland.* Newark, Prudential Press, 1931. 23 pp.

This paper gives a summary of the literature relating to occupational cancer together with some statistics of the incidence of cancer due to the occupation in the United States.

HUMPHREY, EDWARD FRANK. *An economic history of the United States.* New York, Century Co., 1931. 639 pp.; maps, illus.

The chief purpose of this book, as stated by the publisher, is to discover in the record of the economic growth of the United States an explanation of present-day conditions, emphasis being placed upon personalities, descriptions, and movements rather than upon statistics and formulae. The main subject heads of the

volume are: America a part of the old world system—an agricultural era, 1492–1819; America's modification of the agricultural age, 1819–1860; Origins of big business, 1860–1900; Commercialism—world markets and the supertrust, 1900–1914; and World power, 1914–1931.

INDUSTRIAL RELATIONS COUNSELORS (INC.). *Library Bulletin No. 8: Survey of the current literature of industrial relations, 1931 semiannual review.* New York, 165 Broadway, 1931. 38 pp., mimeographed.

INSTITUTE FOR GOVERNMENT RESEARCH. *Service Monographs of the United States Government, No. 64: The Personnel Classification Board—its history, activities, and organization, by Paul V. Betters.* Washington, Brookings Institution, 1931. 160 pp.

Gives the history of the Personnel Classification Board, its functions, its organization, the character of its activities, a compilation of the laws governing its operations, financial statement showing appropriations, and a full bibliography of the sources of information, official and private, bearing on the service and its activities.

JENKINSON, MARK WEBSTER. *Some dangers of rationalization.* London, Gee & Co. (Ltd.), [1931?]. 16 pp.

JOHNSEN, JULIA E. *Stability of employment.* New York, H. W. Wilson Co., 1931. 206 pp. (*The Reference Shelf, Vol. VII, No. 2.*)

A compilation of articles, briefs, and bibliographies on the various methods of stabilization, with sections devoted to arguments for and against the need for stabilization.

LABOR RESEARCH ASSOCIATION. *Labor fact book.* New York, International Publishers, 1931. 222 pp.

NATIONAL BUREAU OF CASUALTY AND SURETY UNDERWRITERS. *Educational Series, Vol. V: A guide book for safety education.* New York, 1 Park Avenue, 1931. 89 pp.

Presents a program for safety education in the elementary, secondary, and vocational schools in connection with the various subjects of the regular curriculum and the activities of the school life.

— *Educational Series, Vol. VIII: Safety and health in organized camps, by J. Edward Sanders.* New York, 1 Park Avenue, 1931. 133 pp.

Contains an analysis of accidents and health conditions in more than 500 summer camps, with a summary of the problems and possible remedial measures, advocating the establishment of a camp safety code.

NATIONAL INDUSTRIAL CONFERENCE BOARD (INC.). *The cost of living in the United States, 1914–1930.* New York, 247 Park Avenue, 1931. 170 pp.; charts.

NORWOOD, EDWIN P. *Ford men and methods.* Garden City, N. Y., Doubleday, Doran & Co. (Inc.), 1931. 201 pp.; illus.

Includes descriptions of methods of handling material, accident prevention, sanitation, and waste salvage; of weight and quality standards which must be met in connection with food sold to the employees in the plant by private parties; of the employee-investment plan; and of the trade school, in the River Rouge plant of the Ford Motor Co.

NOURSE, EDWIN G., AND KNAPP, JOSEPH G. *The cooperative marketing of livestock.* Washington, D. C., Brookings Institution, 1931. 486 pp.; charts.

Stated to be "the first extended analysis of one of the national marketing systems set up by the Federal Farm Board." Gives a detailed historical background of the cooperative movement among livestock producers and an analysis of the structure and operation of the recently reorganized and expanded cooperative agency. In three parts, dealing respectively with cooperative shipping, cooperative selling, and current developments.

PRINCETON UNIVERSITY. Industrial Relations Section. *Selected book list: Trade-union history and policies and labor legislation. Princeton, July, 1931. 19 pp., mimeographed.*

PULLERITS, ALBERT. *Estland volk, kultur, wirtschaft. Tallinn, 1931. 356 pp.; illus. (In German.)*

A textbook on Estonia. Contains descriptive and statistical information, the subjects covered including education, cooperation, labor protection, social welfare, public health, etc.

ROGIN, LEO. *The introduction of farm machinery in its relation to the productivity of labor in the agriculture of the United States during the nineteenth century. Berkeley, University of California Press, 1931. 260 pp.; illus. (University of California Publications in Economics, vol. 9.)*

Part I is devoted chiefly to the development of the plow and other tillage implements, and Part II to the wheat-growing industry.

SOUTH MANCHURIA RAILWAY. *Second report on progress in Manchuria to 1930. Dairen, 1931. 307 pp.; maps, charts, illus.*

Data on wages and hours of labor from this publication are given in this issue.

TAYLOR, PAUL S. *Mexican labor in the United States: Bethlehem, Pa. Berkeley, University of California Press, 1931. (University of California Publications in Economics, vol. 7, No. 1, pp. 1-24.)*

VERBAND DER BUCHBINDER UND PAPIERVERARBEITER DEUTSCHLANDS. *Geschaftsbericht über das Jahr 1930. Berlin, [1931?]. 181 pp.*

Annual report on the activities of the German bookbinders' and paper workers' union during 1930, including information on membership, trade agreements, wages, hours, unemployment, social insurance, etc.

VERBAND DER MALER, LACKIERER, ANSTREICHER, TÜNCHER UND WEISSBINDER DEUTSCHLANDS. *Jahrbuch, 1930. Hamburg, 1931. 163 pp.*

The yearbook contains a report of the activities of the German painters, varnishers, house painters, and whitewashers union during 1930, with data on employment conditions, wages, hours, organization, finances, etc.

WAGEL, SRINIVAS RAM. *World economic depression—remedies. New York, Arthur Hill (Inc.), 1931. 152 pp.*

WILLIAMS, IOLO A. *The firm of Cadbury, 1831-1931. New York, Richard R. Smith (Inc.), 1931. 295 pp.; charts, illus.*

A history of the development of the business and industrial experiments of the firm, in which naturally much space is given to its labor policies.

WOOSTER, HARVEY A., AND WHITING, THEODORE E. *Fluctuation in employment in Cleveland and Cuyahoga County, 1923-1928. Ann Arbor, Mich., Edwards Bros. (Inc.), [1930?]. 126 pp.; charts. (Distributed by Department of Economics, Oberlin College.)*

Data from this report are given in this issue.

YENCHING UNIVERSITY. DEPARTMENT OF SOCIOLOGY AND SOCIAL WORK. *Development of agrarian legislation in China (1912-1930), by Jefferson D. H. Lamb. Peiping, 1931. 155 pp.*

In his conclusion the author declares that the Nanking Government's greatest achievement along the line of agrarian reform is the adoption of the new agricultural policy and the promulgation of the land law.

